

**ASSESSMENT OF THE EFFECTIVENESS OF RISK MANAGEMENT PROCESSES USED TO
DEVELOP A COVID-19 RISK STRATEGY AT XYZ PUBLIC HEALTH CARE FACILITY**

Mosebi Alexis Thejane

A field study submitted to the UFS Business School in the Faculty of Economic and Management Sciences in
partial fulfilment of the requirements for the degree

Masters in Business Administration

at the

UFS Business School

University of the Free State

Bloemfontein

Supervisor: Mr Samuel Njenga

12 March 2024

Declaration

I certify that the field study I have submitted here for the Masters in Business Administration degree at the University of the Free State's UFS Business School is entirely original work of mine, and that I have not previously submitted it in whole or in part for a qualification at any other university or faculty at this university.

I also give the University of the Free State the rights to this work.

Signature: _____

Mosebi Alexis Thejane

12 March 2024

Acknowledgements

This research would not have been feasible without the collaboration of numerous people and organisations. The following individuals have my sincere gratitude for their steadfast support during the research period:

I want to start by sincerely thanking God, the Almighty, for giving me the willpower and perseverance to finish my education.

My supervisor, Mr. Samuel Njenga, has also my sincere gratitude for his great advice and assistance, which have been extremely helpful to me in developing as a researcher.

In addition, I would like to express my sincere gratitude to the management and employees of the XYZ Public Health Care Facility as well as the Department of Health for kindly allowing me to perform this study there.

Their collective assistance has been instrumental in the successful execution of this research.

Abstract

This study's objective was to evaluate the effectiveness of the risk management procedures employed in the development of a COVID-19 risk management strategy at the XYZ public health care (PHC) facility in a YZ district in the Free State Province (FSP), South Africa. The findings and knowledge acquired from this study will be utilised to enhance the risk management procedures of the Department of Health and give other public health care facilities advice on how to create flexible and responsive risk management plans in the event that they encounter similar calamities in the future.

The exploratory sequential design, a mixed methods research methodology that combines qualitative and quantitative research approaches, is used in this study. This hybrid research methodology was used to comprehend the effectiveness of the risk management processes implemented by the XYZ PHC facility in effectively addressing COVID-19 infections. To determine the elements of enterprise risk management and the crucial success factors for its effective implementation, a thorough literature review was carried out. Key references included established practices such as ISO 31000, COSO Integrated Enterprise Risk Management frameworks, Department of Health's five-year strategic plan, annual performance plans, and other relevant literature materials. The XYZ PHC facility's enterprise risk management processes were determined by examining the Department of Health's Enterprise Risk Management Guideline and Framework.

In this study, both research methods received equal priority (weighting). Qualitative method was used to provide a comprehensive understanding of the research question. The research question was fully understood through the application of the qualitative method by conducting in-depth interviews which extracted detailed information and contextual insights regarding the enterprise risk management processes utilised, which may not be available in the records and data but can be derived from the participants' experiences, knowledge, and understanding of the COVID-19 pandemic crisis. The researcher utilised enterprise risk management's important critical success factors as a tool to inform the interview questions in order to enhance the depth and rigour of the conversations. Since risk management is a strategic function, face-to-face interviews targeted 20 senior and middle managers who were actively engaged in risk management activities and processes at the XYZ PHC facility. The outcomes of the first phase were then linked to the second phase by means of a questionnaire that was given to roughly 54 middle and upper managers based on the findings of the interviews. This helped with the interpretation of the qualitative findings.

Findings: ERM process used to develop COVID-19 RM strategy in XYZ PHC facility was effective. In order to strengthen ERM processes, there is a need to cascade ERM to lower levels, use of quality improvement plan 's tools and interactive Information and Communication Technology and engage different stakeholders in the processes. Four critical success factors were identified for effective ERM implementation.

Conclusion: Eight elements of ERM are present and functioning in the facility, while majority of top and middle staff have a fairly good ERM experience and are involved in ERM activities.

Key terms: Risk Management (ERM), Enterprise Risk Management (ERM), Critical Success Factors (CSF), COVID-19, Organisational outcomes, Public health care, Productivity, ERM Effectiveness, ERM Processes, Strategy planning (SP).

Table of Contents

Declaration.....	ii
Acknowledgements.....	iii
Abstract.....	iv
List of Tables	xiv
List of Figures.....	xv
List of Abbreviations and Acronyms.....	xviii
Definitions	xxi
Chapter 1: Introduction and Background to the Study.....	1
1.1 Introduction	1
1.2 Background.....	2
1.3 Problem statement	4
1.4 Research questions and primary and secondary research objectives	5
1.4.1 Primary research question.....	5
1.4.2 Secondary research questions	5
1.4.3 Primary research objective.....	6
1.5 Research methodology	6
1.5.1 Research design	7
1.6 Conclusion.....	9
Chapter 2: Literature Review	9
2.1 Introduction	9
2.2 Definitions	12
2.2.1 Risk.....	12
2.2.2 Hazard.....	12
2.2.3 Risk factor.....	12
2.3 Category of risks.....	12
2.3.1 COVID-19 infection as risk factor.....	14
2.4 Definition of risk management	18
2.4.1 Enterprise risk management overview	18
2.4.2 Benefits of enterprise risk management.....	20
2.4.3 Limitations of enterprise risk management.....	21
2.5 Processes of enterprise risk management	23
2.5.1 AS/NZS 4360 framework	25
2.5.2 ISO 31000 framework	25
2.5.3 Framework for the Management of Risk – Canada	25
2.5.4 COSO (2004) Enterprise Risk Management framework	26
2.5.5 Common features of the risk management process	26
2.5.6 Key differences of the risk management process.....	28

2.6	COSO Enterprise Risk Management 2004 framework.....	29
2.6.1	Internal environment.....	29
2.6.2	Objective setting.....	29
2.6.3	Event identification.....	30
2.6.4	Risk assessment.....	31
2.6.5	Risk response.....	31
2.6.6	Control activities.....	32
2.6.7	Information and communication.....	33
2.6.8	Monitoring.....	33
2.7	Measuring the effectiveness of enterprise risk management.....	34
2.8	Critical success factors for effective enterprise risk management.....	37
2.8.1	Commitment and support from top management.....	38
2.8.2	Communication.....	39
2.8.3	Culture.....	40
2.8.4	Organisational structure.....	40
2.8.5	Trust.....	41
2.8.6	Information technology.....	41
2.8.7	Training.....	41
2.9	Policy and procedures of risk management in the public sector.....	42
2.9.1	Role of the public sector in society.....	42
2.9.2	Risk management in the public sector.....	43
2.10	Risk management in the Department of Health, Free State Province.....	44
2.10.1	Organisational structure for addressing risks.....	46
2.10.2	Enterprise risk management framework.....	46
2.11	Summary of key literature findings.....	52
2.12	Conclusion.....	54
	Chapter 3: Research Methodology.....	54
3.1	Introduction.....	54
3.2	Research design.....	54
3.2.1	Implementation.....	55
3.2.2	Integration.....	55
3.2.3	Priority.....	55
3.2.4	Visual model.....	55
3.2.5	Philosophy of the research.....	56
3.3	Sampling strategy.....	59
3.3.1	Sampling for the qualitative phase.....	59
3.3.2	Sampling for the quantitative phase of the study.....	60
3.4	Data collection techniques.....	61
3.4.1	Qualitative aspects of the research.....	61
3.4.2	Quantitative aspects of the research.....	63

3.4.3	Literature review.....	64
3.5	Data analysis.....	67
3.5.1	Qualitative analysis: Thematic analysis.....	67
3.5.2	Quantitative analysis.....	68
3.6	Approach to validity and reliability.....	69
3.6.1	Qualitative.....	69
3.6.2	Quantitative.....	71
3.7	Ethical considerations.....	72
3.7.1	Permission.....	72
3.7.2	Informed consent.....	72
3.7.3	Voluntary participation.....	72
3.7.4	Confidentiality and anonymity.....	72
3.7.5	No harm principle.....	73
3.7.6	Ethical data management.....	73
3.7.7	Privacy and non-disclosure.....	73
3.8	Conclusion.....	77
Chapter 4: Qualitative research results.....		Error! Bookmark not defined.
4.1	Introduction.....	78
4.2	Profile of research participants.....	79
4.2.1	Level of seniority.....	79
4.2.2	Area of responsibility.....	80
4.2.3	Duration of employment.....	81
4.2.4	Role of participants in the Enterprise Risk Management Committee.....	82
4.3	Enterprise risk management.....	83
4.3.1	Definition of enterprise risk management.....	83
4.4	Processes of enterprise risk management.....	83
4.4.1	Alignment of COVID-19's risk management with the facility's strategic objectives.....	83
4.4.2	Frequency of enterprise risk management meetings.....	84
4.4.3	Main stakeholders that were involved in enterprise risk management.....	85
4.4.4	Communication methods.....	86
4.4.5	Risk assessment.....	86
4.4.6	Reviewing process.....	87
4.4.7	Bottlenecks.....	89
4.4.8	Criteria were used to align identified risks with the organisation's objectives and goals.....	90
4.5	Critical success factors of effective enterprise risk management implementation.....	91
4.5.1	Stakeholder engagement.....	91
4.5.2	Monitoring.....	Error! Bookmark not defined.
4.5.3	Training.....	91
4.5.4	Trust.....	92
4.5.5	Information communication and technology.....	93

4.5.6	Organisational structure	93
4.5.7	Organisational culture.....	94
4.5.8	Role of top management	95
4.6	Criteria are used to assess the effectiveness of enterprise risk management.....	95
4.6.1	Criteria were used to assess the effectiveness of enterprise risk management (benchmarks)	95
4.7	Impact of COVID-19 risk management on facility performances and awareness	96
4.7.1	Impact of the COVID-19 risk management strategy on performance	96
4.7.2	Impact of the COVID-19 pandemic on enterprise risk management awareness.....	97
4.7.3	Impact of the COVID-19 infection on staff.....	97
4.7.4	Management of the COVID-19 pandemic	98
4.8	Effectiveness of risk management process used to develop the COVID-19 Risk Management Strategy at the XYZ public health care facility	98
4.8.1	Effectiveness of risk management process used to develop the COVID-19 Risk Management Strategy (26)	98
4.9	Identify mechanisms to improve enterprise risk management.....	99
4.9.1	Valuable lessons	99
4.9.2	Best practices	100
4.9.3	Future improvements	100
4.10	Conclusion	105
Chapter 5: Qualitative results analysis		106
5.1	Introduction	106
5.2	A discussion and analysis of key themes.....	106
5.2.1	Leadership approach.....	107
5.2.2	Assessment criteria for effective enterprise risk management.....	111
5.2.3	Quality improvement plan	Error! Bookmark not defined.
5.2.4	Disaster or crisis preparedness.....	Error! Bookmark not defined.
5.2.5	Mental health awareness	Error! Bookmark not defined.
5.3	Conclusion.....	113
Chapter 6: Quantitative research results.....		114
6.1	Introduction	114
6.2	A discussion and analysis data	Error! Bookmark not defined.
6.3	Response rate.....	114
6.4	Management experience	115
6.4.1	Level of experience (risk management).....	115
6.4.2	Duration of service	116
6.4.3	Level of management	116
6.5	Analysis and interpretation management experience	Error! Bookmark not defined.
6.6	Enterprise risk management	117
6.7	Definition of enterprise risk management	117
6.8	The process of enterprise risk management.....	120

6.8.1	Objective setting (12)	120
6.8.2	Internal environment (11)	122
6.8.3	Event identification (5)	124
6.8.4	Risk assessment (6)	126
6.8.5	Risk response (7)	127
6.8.6	Control activities (8)	129
6.8.7	Information and communication (9)	131
6.8.8	Monitoring (10)	132
6.9	Critical success factors	135
6.9.1	Stakeholder involvement (13)	135
6.9.2	Communication (14)	137
6.9.3	Resources (15)	139
6.9.4	Training (16)	141
6.10	Impact of enterprise risk management on performance	144
6.10.1	Impact on performances (17)	144
6.11	Evaluation of the effectiveness of enterprise risk management	146
6.11.1	Efficiency indicators (18)	147
6.11.2	Enterprise risk management benchmarks (19)	149
6.12	Identified themes for the qualitative research (best practices)	151
6.12.1	Quality improvement plan (20)	152
6.12.2	Information and communication technology (21)	154
6.12.3	Cascading downwards (22)	156
6.12.4	Crisis-preparedness (23)	159
6.13	Enterprise risk management and COVID-19 infection	162
6.13.1	Mental health awareness (24)	162
6.13.2	Processes of enterprise risk management (25)	165
6.13.3	Awareness of enterprise risk management (26)	167
6.14	Conclusion	178
Chapter 7: Quantitative research results		114
7.1	Introduction	114
7.2	Analysis and interpretation management experience	Error! Bookmark not defined.
7.3	Enterprise risk management	117
7.3.1	Definition of enterprise risk management	117
7.4.1	The process of enterprise risk management	120
7.4.1	Objective setting (12)	120
7.4.2	Internal environment (11)	122
7.4.3	Event identification (5)	124
7.4.4	Risk assessment (6)	126
7.4.5	Risk response (7)	127

7.4.6	Control activities (8)	129
7.4.7	Information and communication (9)	131
7.4.8	Monitoring (10)	132
7.5	Critical success factors	135
7.5.1	Stakeholder involvement (13)	135
7.5.2	Communication (14)	137
7.5.3	Resources (15)	139
7.5.4	Training (16)	141
7.6	Impact of enterprise risk management on performance	144
7.6.1	Impact on performances (17)	144
7.7	Evaluation of the effectiveness of enterprise risk management	146
7.7.1	Efficiency indicators (18)	147
7.7.2	Enterprise risk management benchmarks (19)	149
7.8	Identified themes for the qualitative research (best practices)	151
7.8.1	Quality improvement plan (20)	152
7.8.2	Information and communication technology (21)	154
7.8.3	Cascading downwards (22)	156
6.12.4	Crisis-preparedness (23)	159
7.9	Enterprise risk management and COVID-19 infection	162
7.9.1	Mental health awareness (24)	162
7.9.2	Processes of enterprise risk management (25)	165
7.9.3	Awareness of enterprise risk management (26)	167
7.10	Conclusion	178

Chapter 8: Data integration178

8.1	Introduction	184
8.2	Data integration and discussion of research participants and respondents	184
8.3	Definition of enterprise risk management	185
8.4	Enterprise risk management processes	185
8.4.1	Objective setting (12)	185
8.4.2	Internal environment (11)	186
8.4.3	Event identification (5)	186
8.4.4	Risk assessment (6)	187
8.4.5	Risks response (7)	187
8.4.6	Control activities (8)	188
8.4.7	Information and communication (9)	189
8.4.8	Monitoring (10)	189
8.5	Critical success factors	190
8.5.1	Stakeholder involvement (13)	190

8.5.2	Communication (14).....	190
8.5.3	Resources (15).....	191
8.5.4	Training (16).....	191
8.6	Impact on performances (17).....	192
8.6.1	Impact on performances (17).....	192
8.6.2	Awareness of enterprise risk management	192
8.7	Evaluation of effectiveness.....	192
8.7.1	Efficiency indicators (18).....	192
8.7.2	Enterprise risk management benchmarks (19).....	193
8.8	Best practices: Presents the primary themes that emerged from the analysis of the interviews and their correspondence survey study results.....	193
8.8.1	Quality improvement plan (20).....	193
8.8.2	Information and communication technology (21)	194
8.8.3	Cascading downwards (22).....	194
8.8.4	Mental health awareness (24).....	195
8.8.5	Crisis-preparedness (23)	195
8.9	Conclusion.....	200
Chapter 9: Conclusion, strengths, limitations and recommendations.....		202
9.1	Introduction	Error! Bookmark not defined.
9.2	Key observations (summary).....	Error! Bookmark not defined.
9.2.1	ERM experience.....	Error! Bookmark not defined.
9.2.2	ERM approach.....	Error! Bookmark not defined.
9.2.3	ERM monitoring.....	Error! Bookmark not defined.
9.2.4	ERM: control activities.....	144
9.3	Limitations of this research	Error! Bookmark not defined.
9.3.1	Lack of corroboration of research findings.....	Error! Bookmark not defined.
9.3.2	Inability to generalise findings	Error! Bookmark not defined.
9.4	Recommendations	Error! Bookmark not defined.
9.4.1	Recommendations for XYZ PHC facility.....	Error! Bookmark not defined.
9.4.1.1	Training of employees on the concepts of ERM.....	145
9.4.1.2	Communication strategy.....	145
9.4.1.3	Monitoring risk management effectiveness using efficacy indicators.....	146
9.4.1.4	Reviewing risk management effectiveness using risk management benchmarks.....	148
9.4.1.5	An integrated employee wellness programme with risk management.....	149
9.4.1.7	Crisis preparedness plan.....	150
9.4.1.7	Critical success factors for effective ERM implementation.....	150
9.4.2	Strategies to strengthen ERM.....	2.....151
9.4.2.1	Cascading risk to lower levels of the facility.....	151
9.4.2.2	Quality improvement plan	151
9.4.2.3	Multi-sectoral planning for ERM	151

9.4.2.4) Integrating a live (interactive) information and communication system in the RM process.....	152
9.4. 3. New framework for enterprise risk management	152
9.5 Recommendation for further research.....	152
9.5.1. Triangulation of research results by interviewing health professionals.....	153.
9.5.2. A longitudinal study to track the enterprise risk management behaviour.....	154
9.6. Summary of recommendations.....	155
9.7 Conclusion.....	Error! Bookmark not defined.
References.....	Error! Bookmark not defined.
Appendices.....	228
Appendix A: Qualitative research guide for research participants	228
Appendix B: Qualitative Research Guide for Research Participants.	228
Appendix C: Permission letter for District Manager.....	231
Appendix D: Cover letter	232
Appendix E: Consent form for participants	236
Appendix F: Permission letter to Head of Department	Error! Bookmark not defined.
Appendix G: Pledge of confidentiality.....	238
Appendix H: Ethical clearance letters	242
Appendix I: Quantitative research guide for research participants	243
Appendix J: Survey / interviews schedule (data collection tools).....	Error! Bookmark not defined.
Appendix K: Permission letters	Error! Bookmark not defined.

List of Tables

Table 1.1: Summary of key findings.....	7
Table 2.1: The XYZ public health facility’s Top 10 risks and departmental outcomes	13
Table 2.2: Biological pathogens classification.....	15
Table 2.3: Hierarchy of controls	17
Table 2.4: Comparison of frameworks.....	25
Table 2.5: Critical success factors for the implementation of enterprise risk management	38
Table 2.6: Risk methodology	48
Table 2.7: Control rating	50
Table 2.8: Tolerance levels	51
Table 2.9: Summary of key findings	52
Table 3.1: Mixed methods research process – outline of Phase 1	62
Table 3.2: Study objectives aligned to data collection methods.....	65
Table 3.3: Five principles and strategies of qualitative research.....	69
Table 3.4: summary of mixed methods process to be used in the research.....	72
Table 4.1: Summary of key findings from qualitative research.....	98
Table5.1: Summary of key themes.....	107
Table 6.1: Summary of key findings from quantitative research.....	165
Table 7.1: Summary of key findings.....	175
Table 8.1: Summary of findings regarding primary & secondary objectives.....	188
Table: 9.1: Summary of recommendations.....	199

List of Figures

Figure 1.1: Active cases in South Africa (adapted from Jassat et al. (2021:e1218).....	3
Figure 2.1: Chapter outline	11
Figure 2.2: Enterprise risk management framework (adapted from CPA 2022).....	19
Figure 2.3: AS/NZS ISO 3100 risk management (2004)	24
Figure 2.4: COSO Enterprise Risk Management (2004) Management Cube	29
Figure 2.5: Critical success factors of risk management (adapted from Department of Health 2020).....	45
Figure 2.6: Risk tolerance (adapted from Department of Health 2020).....	47
Figure 2.7: Heat map (adapted from Department of Health 2020)	51
Figure 3.1: Exploratory Sequential Design (adapted from Creswell 2003:206-212).....	56
Figure 3.2: Thematic analysis (adapted from Clarke and Braun 2013:4).....	67
Figure 4.1: Level of seniority.....	80
Figure 4.2: Area of responsibility	81
Figure 4.3: Duration of employment.....	82
Figure 4.4: Alignment of COVID-19's risk management with the objectives of the facility	84
Figure 4.5: Stakeholders	85
Figure 4.6: Communication methods	86
Figure 4.7: Sources of reviewed data	88
Figure 4.8: Challenges during the COVID-19 pandemic.....	90
Figure 4.9: Monitoring activities.....	89
Figure 4.10: Training during the COVID-19 pandemic.....	92
Figure 4.11: Criteria used to assess the effectiveness of enterprise risk management.....	96
Figure 4.12: Effectiveness of the enterprise risk management processes	99
Figure 5.1: Key research observations	107
Figure 5.2: Factors of leadership approach	108
Figure 5.3: Leadership and management roles during the COVID-19 pandemic	109
Figure 6.1: Level of management experience	115
Figure 6.2: Duration of employment.....	116
Figure 6.3: Level of management	117
Figure 6.4: Respondents' answers to all the research questions.....	Error! Bookmark not defined.
Figure 6.5.1: Respondents' answers regarding understanding of ERM using different of ERM experience.....	118
Figure 6.5.2: Respondents' answers regarding understanding of ERM using duration of employment	119
Figure 6.5.3: Respondents' answers regarding understanding of ERM using level of management	120
Figure 6.6.1: Respondents' answers regarding objective setting using different of ERM experience	121
Figure 6.6.2: Respondents' answers regarding using duration of employment.....	121
Figure 6.6.3: Respondents' answers regarding objective setting using level of management	122
Figure 6.7.1: Respondents' answers regarding internal environment using different ERM experiences.....	123
Figure 6.7.2: Respondents' answers regarding internal environment using duration of employment	123
Figure 6.7.3: Respondents' answers regarding internal environment using level of management	124
Figure 6.8.1: Respondents' answers regarding event identification using different ERM experiences	125

Figure 6.8.2: Respondents' answers regarding event identification using duration of employment	125
Figure 6.8.3: Respondents' answers regarding event identification using level of management	125
Figure 6.9.1: Respondents' answers regarding risk assessment using different ERM experiences	126
Figure 6.9.2: Respondents' answers regarding risk assessment using duration of employment	127
Figure 6.9.3: Respondents' answers regarding risk assessment using level of management	127
Figure 6.10.1: Respondents' answers regarding risk responses using different ERM experiences.....	128
Figure 6.10.2: Respondents' answers regarding risk responses using duration of employment	128
Figure 6.10.3: Respondents' answers regarding risk responses using level of management	Error! Bookmark not defined.
Figure 6.11.1: Respondents' answers regarding control activities using differentERM experiences	130
Figure 6.11.2: Respondents' answers regarding control activities using duration of employment	130
Figure 6.11.3: Respondents' answers regarding control activities using level of management	Error! Bookmark not defined.
Figure 6.12.1: Respondents' answers regarding information and communication using different ERM experiences	131
Figure 6.12.2: Respondents' answers regarding information and communication using duration of employment	132
Figure 6.12.3: Respondents' answers regarding information and communication using level of management ..	132
Figure 6.13.1: Respondents' answers regarding monitoring using different ERM experiences	133
Figure 6.13.2: Respondents' answers regarding monitoring using duration of employment	134
Figure 6.13.3: Respondents' answers regarding monitoring using level of management	134
Figure 6.14: Summary of the processes of enterprise risk management	135
Figure 6.15.1: Respondents' answers regarding stakeholder involvement using different ERM experiences.....	136
Figure 6.15.2: Respondents' answers regarding stakeholder involvement using duration of employment	137
Figure 6.15.3: Respondents' answers regarding stakeholder involvement using level of management	137
Figure 6.16.1: Respondents' answers regarding communication using differentERM experiences	138
Figure 6.16.2: Respondents' answers regarding communication using duration of employment	139
Figure 6.16.3: Respondents' answers regarding communication using level of management	139
Figure 6.17.1: Respondents' answers regarding resources using different ERM experiences	140
Figure 6.17.2: Respondents' answers regarding resources using duration of employment.....	141
Figure 6.17.3: Respondents' answers regarding resources using level of management.....	141
Figure 6.18.1: Respondents' answers regarding training using different ERM experiences.....	142
Figure 6.18.2: Respondents' answers regarding training using duration of employment	143
Figure 6.18.3: Respondents' answers regarding training using level of management	143
Figure 6.19: Summary of critical success factors.....	144
Figure 6.20.1: Respondents' answers regarding facility performances using different ERM experiences	145
Figure 6.20.2: Respondents' answers regarding facility performances using the duration of employment.....	146
Figure 6.20.3: Respondents' answers regarding facility performances using the level of management	146
Figure 6.21.1: Respondents' answers regarding efficiency indicators using different ERM experiences	148
Figure 6.21.2: Respondents' answers regarding efficiency indicators using duration of employment	148

Figure 6.21.3: Respondents’ answers regarding efficiency indicators using level of management	148
Figure 6.22.1: Respondents’ answers regarding ERM benchmarks using different ERM experiences	150
Figure 6.22.2: Respondents’ answers regarding ERM benchmarks using duration of employment.....	150
Figure 6.22.3: Respondents’ answers regarding ERM benchmarks using level of management	151
Figure 6.23: Summary of evaluation criteria used to assess the effectiveness of ERM	151
Figure 6.24.1: Respondents’ answers regarding QIP using different ERM experiences	153
Figure 6.24.2: Respondents’ answers regarding QIP using duration of employment	153
Figure 6.24.3: Respondents’ answers regarding QIP using level of management	154
Figure 6.25.1: Respondents’ answers regarding ICT using different ERM experiences.....	155
Figure 6.25.2: Respondents’ answers regarding ICT using duration of employment	156
Figure 6.25.3: Respondents’ answers regarding ICT using level of management	156
Figure 6.26.1: Respondents’ answers regarding cascading downwards using different ERM experiences	157
Figure 6.26.2: Respondents’ answers regarding cascading downwards using duration of employment.....	158
Figure 6.26.3: Respondents’ answers regarding cascading downwards using level of management.....	159
Figure 6.27.1: Respondents’ answers regarding crisis-preparedness using different ERM experiences	160
Figure 6.27.2: Respondents’ answers regarding crisis-preparedness using duration of employment	161
Figure 6.27.3: Respondents’ answers regarding crisis-preparedness using level of management	161
Figure 6.28: Summary of identified themes	162
Figure 6.29.1: Respondents’ answers regarding MH awareness using different ERM management experiences	163
Figure 6.29.2: Respondents’ answers regarding MH using duration of employment	164
Figure 6.29.3: Respondents’ answers regarding MH awareness using level of management	164
Figure 6.30.1: Respondents’ answers regarding processes of ERM using different ERM experiences.....	166
Figure 6.30.2: Respondents’ answers regarding processes of ERM using duration of employment	166
Figure 6.30.3: Respondents’ answers regarding processes of ERM using level of management	167
Figure 6.31.1: Respondents’ answers awareness of ERM using different ERM experiences	168
Figure 6.31.2: Respondents’ answers regarding awareness of ERM using duration of employment	169
Figure 6.31.3: Respondents’ answers regarding awareness of ERM level of management	169
Figure 6.32: Impact of COVID-19 infections	170

List of Abbreviations and Acronyms

AG	Auditor-General
AOP	Annual operational plan
AS/NZS	Standards Australian/New Zealand Standards
CEO	Chief Executive Officer
COSO	Committee of Sponsoring Organisations of the Treadway Commission
CRO	Chief Risk Officer
CSF	Critical Success Factor
DoH	Department of Health
DM	District Manager
EPA	Environmental Protection Agency
ERM	Enterprise Risk Management
ESD	Exploratory Sequential Design
EWRM	Enterprise-Wide Risk Management
FSP	Free State Province
GHREC	General Human Research Ethic Committee
HCO	Healthcare Organisation
HCW	Healthcare Workers
HPCSA	Health Professions Council of South Africa
HAS	Health and Safety Authority
HR	Human Resource
HSRC	Human Sciences Research Council

IPC	Infection Prevention Control
IRGC	International Risk Governance Council
ISO	International Organisation for Standardisation
ICU	Intensive Care Unit
ICT	Information and Communication Technology
IT	Information Technology
KZN	KwaZulu-Natal
MH	Mental Health
MMR	Mixed Method Research
NDP	National Developmental Plan
NICD	National Institute for Communicable Diseases
NIOH	National Institute for Occupational Health
NIST	National Institute of Standards and Technology
OSHA	Occupational Safety and Health Administration
PHC	Public Health Care/Primary Health Care
PhD	Doctor of Philosophy
PII	Personal Identifying Information
POPI	Protection of Personal Information
PPE	Personal Protective Equipment
PSC	Public Service Commission
QIP	Quality Improvement Plan
ERM	Enterprise Risk Management
RSA	Republic of South Africa

SA	South Africa
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
SBP	State Bank of Pakistan
SOP	Standard Operation Procedure
TM	Top Management
UFS	University of the Free State
WHO	World Health Organisation
XD	Xhariep District

Definitions

Coronavirus	Severe Acute Respiratory Syndrome Coronavirus 2 is the virus that causes COVID-19 infection (SARS-CoV-2).
COVID wave	The duration of time between when the weekly incidence of COVID-19 is 30 instances or more per 100,000 people and when it is less than that amount.
Designated COVID-19 facility	A full hospital or a distinct building inside a hospital should house this healthcare facility, which provides comprehensive care for patients who have been clinically diagnosed as COVID-19 infected or who are being investigated for COVID-19 infection following exposure.
Enterprise Risk Management/Enterprise-Wide Risk Management/Risk Management	A systematic, comprehensive strategy to managing hazards inside a business.
Health Care Organisation (HCO)/Public Health Care facility	Any entity approved to provide healthcare service.
Presenteeism	Arriving to work when one is ill.
Risk	Potential occurrence that might jeopardise or obstruct the achievement of goals
Risk champion	A person who possesses the abilities, wisdom, and charisma necessary to advance risk management.
DATCOV database	A system of active surveillance for COVID-19 admissions that was started in March 2020 and has successfully covered every hospital in South Africa that has admitted a COVID-19 patient.

Chapter 1: Introduction and Background to the Study

1.1 Introduction

Health and safety laws, such as the Occupational Health and Safety Act (OHS 1993:2) and its hazardous biological agent regulations, stipulate that employers must furnish and sustain, to the extent reasonably feasible, a secure environment devoid of risks for their workers. Employers are legally obligated to establish a risk mitigation strategy that aims to manage potential workplace hazards and risks, ensuring a safe working environment for both staff and clients. The management of risk and uncertainty serves as an indispensable tool for organisations to attain their objectives. Consequently, the significance of effective enterprise risk management (ERM) programmes within an organisation's strategy cannot be underestimated.

Asanati (2020) claims that the COVID-19 epidemic has elevated occupational risk to the top of ERM procedures, posing issues for organisations as well as for people and society as a whole. Therefore, an effective ERM strategy will assist individuals, organisations, and businesses in delivering services and creating value for their stakeholders worldwide, even amidst the volatile COVID-19 pandemic, while concurrently reducing mortality and morbidity associated with the pandemic. The successful implementation of researched and peer-reviewed critical success factors (CSFs) of an ERM strategy enhances the likelihood of success by enabling management and boards to make sound and pertinent business decisions when confronted with uncertainties. The organization's value could be lost, and its reputation and brand among customers and stakeholders could also be harmed, if ERM procedures and practices are not strengthened and put into place.

This study presents the background and theory of ERM and its diverse processes, and examines the concept of COVID-19 infection and its various wave patterns in South Africa as a risk factor in healthcare settings and its impact on healthcare workers (HCWs). The study also investigates the factors known to influence and define Enterprise risk management (ERM) or Risk management (RM) or Enterprise-wide risk management (EWRM). This study adopts the term "enterprise risk management" in accordance with the International Organisation for Standardisation (ISO) 31000 standards and the Committee of Sponsoring Organisations of the Treadway Commission (COSO) ERM integrated framework terminology, despite the fact that different authors use these three terms interchangeably. The study also explores theories related to measuring the effectiveness of ERM, followed by literature highlighting critical success factors for effective implementation of ERM. Furthermore, the study provides information about the role and function of Public Health Care (PHC) in society, as well as the creation and execution of South Africa's public sector risk strategy.

The management of other PHC facilities in comparable situations can make use of the knowledge and conclusions obtained from this study to improve their processes for developing strategies and bolster the efficacy of their present risk response. Furthermore, this will aid in preparing their organisations for future pandemics and subsequent waves. Based on the background information provided, a problem statement is identified and defined, and relevant research questions and objectives are formulated to fulfil the study's objectives.

1.2 Background

The World Health Organisation (WHO) formally proclaimed the COVID-19 illness to be a pandemic on March 11, 2020, and a public health emergency on January 30, 2020, after it was first discovered in Wuhan Province, China, in December 2019. (Al Maskari et al.,2020:32-36). South Africa announced its first COVID-19 infection case on March 5, 2020. In order to stop the sickness from spreading throughout the nation, the president of South Africa subsequently issued a state of disaster on March 15, 2020 (Disaster Management Act 2020:3).

Severe Acute Respiratory Syndrome Coronavirus 2 is the virus that causes COVID-19 infection (SARS-CoV-2) and can be transmitted when an infected individual is in proximity to co-workers, patients, clients, or customers (Ashour et al., 2020). Research indicates that the prevalence of COVID-19 is higher among individuals who work outside their homes and in healthcare settings, suggesting that frequent contact with the public, customers, or patients may elevate the risk of infection (Chen et al., 2021). The COVID-19 pandemic is the biggest coronavirus-caused pandemic in history and the most major epidemic of the twenty-first century (Srivastava 2020).

HCWs are susceptible to contracting COVID-19 infection following unprotected exposure during both patient care and non-patient care activities. Consequently, compared to the general population, healthcare workers (HCWs) who treat patients with proven COVID-19 infection and act as frontline workers have a higher risk of exposure (Ferioli et al. 2020; Wei et al. 2021). Hospitalised patients, their relatives, and other healthcare workers are at danger from infected healthcare workers (Shah et al. 2020). However, compared to non-HCWs, HCWs are anticipated to have more favourable results in terms of hospitalisation and mortality because of their generally superior health (Misra-Hebert et al. 2020; Wei et al. 2020; Zheng et al. 2020). However, De Pablo et al. (2020) and Shaukat et al. (2020) state that the COVID-19 pandemic poses an unparalleled physical and psychological burden for healthcare workers globally.

Thousands of vital workers across a range of vocations have either perished or become infected with COVID-19 worldwide (WHO 2021b). Over 100 million people were thought to have contracted SARS-CoV-2 by the end of January 2021, and the virus was blamed for over 2.25 million fatalities (WHO 2021b). In the healthcare sector alone, WHO (2020) projected that by the end of July 2021, approximately 1,2 million HCWs had been affected by COVID-19, accounting for 10% of global infections. Moreover, it was estimated that between January 2020 and May 2021, the number of HCW deaths from COVID-19 ranged between 80,000 and 180,000, with a median scenario of 115,500 deaths (WHO 2021b). Based on 2020 data from 97 healthcare settings in Europe, the US, and Asia, a review of infection prevalence in healthcare workers (HCWs) revealed that the prevalence was approximately 7% based on antibody-based testing, and approximately 11% based on reverse transcription PCR (RT-PCR) assays (Gómez-Ochoa et al, 2021). Furthermore, a survey carried out in 37 countries revealed that HCWs infected with COVID-19 had an average death rate of 0.05 per 100,000 inhabitants (Erdem & Lucey 2021).

47 nations in the WHO African area reported 7,1 million infections and 155,000 fatalities as of December 31, 2021; these figures represent 2,5% and 2,9% of the worldwide COVID-19 burden, respectively (WHO 2022). With regard to the total number of confirmed COVID-19 infections during the first year of the pandemic, South Africa ranked among the top five nations in Africa (Impouma et al.,2021). There have been four waves of COVID-19 infections in South Africa since the first case was reported on March 5, 2020. According to the National Institute

for Communicable Diseases [NICD] 2021; Jassat et al. 2022:121, a wave is the duration of time that occurs between when the weekly incidence of COVID-19 reaches or surpasses 30 cases per 100,000 individuals and when the weekly incidence drops below 30 cases per 100,000 individuals. The four waves of COVID-19 infections in South Africa are depicted in Figure 1.1. According to Jassat et al. (2022:963), there were 553 530 positive SARS-CoV-2 patients found during the first wave, 726 772 in the second wave, 1 306 260 in the third wave, and 629 617 in the fourth wave.

Active Cases in South Africa

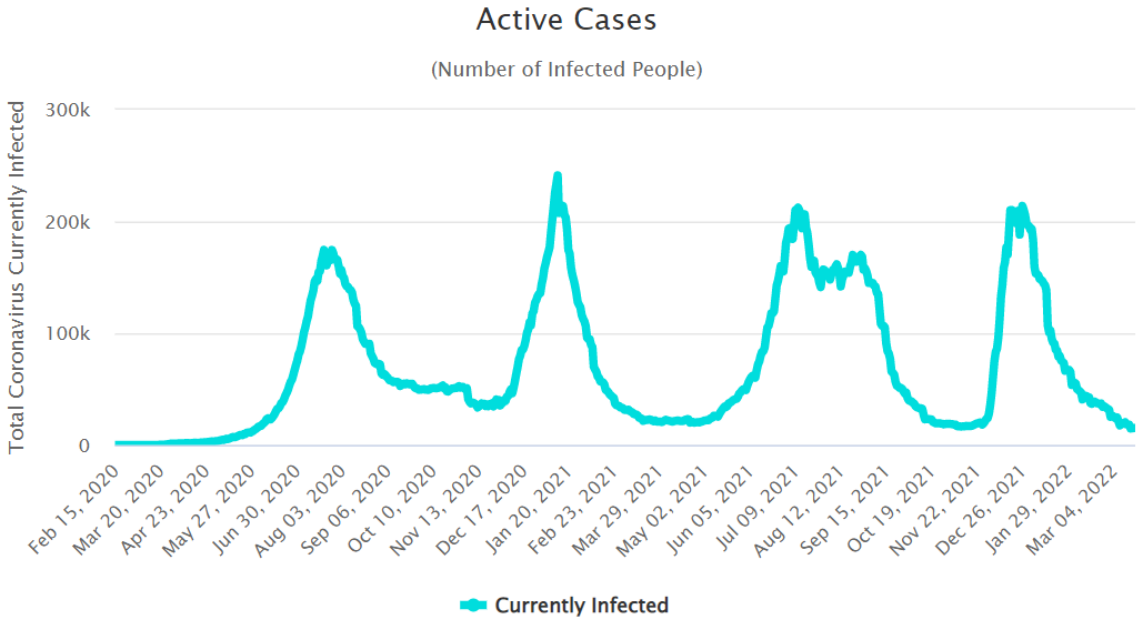


Figure 1.1: Active cases in South Africa (adapted from Jassat et al. (2021:e1218)

According to national epidemiological records, HCW admissions peaked in week 28 of 2020 during the pandemic's first wave, in week 1 of 2021 during the second wave, and in week 27 during the third wave (National Institute for Communicable Diseases [NICD] 2021:2). 1 656 (17,6%) of the 9 417 hospitalised HCWs got care in the critical care unit (ICU). Of them, 337 (33,1%) needed both procedures, 576 (34,8%) needed invasive mechanical ventilation, and 1 019 (62%) needed extra oxygen (NICD 2021:9). Out of the HCWs who were admitted, 8 018 (85,1%) were released from the hospital alive, 90 (1%), were still hospitalised, 103 (1%), were moved to step-down or high-level care facilities, and 1 206 (12,8%) had tragically passed away from the infection (NICD 2021:10).

Maltezou et al. (2021:121) claim that there is a correlation between higher rates and longer periods of absenteeism among HCWs and COVID-19 infection. The Department of Health (2020a) states that the requirement for isolation and quarantine in accordance with national rules is partially to blame for this significant effect on absenteeism. HCWs are also vulnerable to physical and psychological ailments, which further contribute to absenteeism or presenteeism (Yaghoubi et al. 2022:105). Presenteeism refers to HCWs continuing to work despite displaying

symptoms of or having symptoms compatible with COVID-19. This practice exacerbates the risk of further infection among HCWs during the ongoing pandemic and complicates staff placements and rotations in primary healthcare (PHC) facilities.

During the first wave, Free State Province (FSP) recorded over 1 200 HCWs infected with COVID-19. The districts most affected by these infections were Mangaung and the lowest number of HCW infections due to its smaller HCW population Lejweleputswa, respectively. Among the districts in FSP, the ZY District had fewer healthcare facilities. However, within the ZY District, the majority (288 – 62,1%) of infected HCWs during the first wave were associated with the XYZ PHC facility, which serves as the site for this study. During Second wave and third wave of COVID-19, infection rate among the HCW dropped to 48% and 32% respectively and finally during fourth wave it remain at 18% case fatality rate of the decline to 1% at the end of the fourth wave, from the initially rate of 6% during the first wave, and 1,8% and 2,3% during second and third waves. Number of health care workers with mental conditions due to work overload and stress related to COVID-19 reduced dramatically after appointment of social worker and psychologists to care for patients and staff needs.

When COVID-19 first appeared in South Africa, the XYZ PHC facility was transformed into a COVID-19 facility specifically for that disease. Alongside its regular services as part of the district health services package, the XYZ PHC facility took on the role of treating and admitting COVID-19 patients. This arrangement led to an influx of patients from towns in the Eastern and Northern Cape regions, located within radius of 214 km and 114 km, respectively. The increased transfers and admissions to the XYZ PHC facility amplified the risk of contracting COVID-19 infection within its premises, hence requiring the adoption of a effective enterprise risk management plan (Bielicki et al., 2020:261-267).

Department of Health, in alignment with the national government, typically formulates strategic goals and objectives, which include the identification and mitigation of its top ten strategic risks. Risk assessments and mitigation plans are developed and monitored annually as part of the organisation's performance plans. The implementation of a successful enterprise risk management procedure that facilitates the accomplishment of organisational objectives is ensured through quarterly review meetings. Monthly reviews of mitigation plans take institutional risk appetite into account.

1.3 Problem statement

It is required that all primary healthcare facilities implement an efficient ERM approach. A primary healthcare facility's performance is evaluated based on a number of variables, such as patient volume, low staff turnover, average duration of stay, patient satisfaction, caesarean section rates, use of inpatient beds, rates of resolving complaints, and cost per patient day equivalent.

The XYZ PHC facility encountered numerous COVID-19-related difficulties during the province's initial pandemic wave, despite having an ERM policy in place. It experienced a surge of infections among HCWs due to a cluster outbreak in Bethulie town within its catchment area. Out of the 621 cases of COVID-19 treated at the XYZ PHC facility, 164 were HCWs. During the first wave of the pandemic, staff absenteeism due to HCW infections increased by 22,6%, deviating from the international norm of 3%. Furthermore, the COVID-19 infection

increased the death rate among healthcare workers (HCWs) at the XYZ PHC facility to 6% from the pre-COVID-19 rate of 1%. Therefore, in order to reinforce the facility ERM programme, the management of the XYZ PHC facility requested support from the WHO technical team and the provincial department.

During the subsequent waves, the mortality rate stabilised below the national average of 2,5% case fatality rate. It ranged between 1% and 2% from the third and four waves, with the second wave having the highest figure of 2,3%. Inpatient, bed utilisation was raised above the national norm of 75% from the low level of 27,3% pre-COVID-19 periods due to high transfers of patients from neighbouring provinces of Eastern and Northern Cape. During the first wave, it attained 78,3%, followed by 75,8% and 77,3% during the second wave. Finally, it achieved 82,6% bed occupancy in the four waves mostly admitting severely ill patients who needed supplementary oxygen. Ongoing COVID-19 training, individual risk assessment and psychosocial support that included debriefing sessions were used to improve HCW's education that resulted in a higher number of healthcare workers vaccinating against the virus among the four district hospitals within the YZ district and also helped to reduce the number of HCWs referred for mental health interventions. The XYY PHC facility continued to achieve its main strategic goals of zero maternal and under – 5year deaths, as well as better patient satisfaction scores regarding clinical care.

Despite success in reaching its strategic goals, the XYZ PHC facility wants to explore and understand in depth the ERM process and CSF's that led to effective ERM. This will enable the XYZ PHC facility to respond more quickly and adaptable in the future by utilising technology to detect suspects, modifying referral routes within its catchment area, better working relationships with private and other public healthcare facilities, establishing quarantine sites and extra financial resources during the crisis by removing unnecessary processes such as centralisation of decision-making regarding patient case management, long and multiple meetings, duplications of crisis structures and vague reporting lines during implementation.

The purpose of this study is to assess how well the XYZ PHC facility's ERM managed the difficulties brought on by the COVID-19 pandemic, enabling healthcare institutions to establish efficient, custom-made procedures and be ready for any future interruptions.

1.4 Research questions and primary & secondary research objectives

The following research questions have been developed specifically for this study to make sure that the goals of the investigation are fulfilled and the problem statement is addressed.

1.4.1 Primary research question

How effective was the risk management process used to develop the COVID-19 risk management strategy at the XYZ PHC facility?

1.4.2 Secondary research questions

The study's secondary research questions are as follows:

- What is enterprise risk management?
- What criteria are used to assess the effectiveness of enterprise risk management?
- What are the critical success factors for effective enterprise risk management procedures?
- What was the impact of the COVID-19 risk management strategy on the XYZ PHC facility's performance?
- How can the XYZ PHC facility's enterprise risk management strategy be improved to better cope with future risks such as COVID-19?

1.4.3 Primary research objective

This study's main goal is to assess how well the risk management procedure that was used to create the COVID-19 risk management plan at the XYZ PHC facility worked. so that, in the event of a crisis, healthcare facilities in a similar setting can design quick, customised, low-risk actions that will accomplish their objectives without squandering time or money.

1.4.4 Secondary research objectives

The following are the secondary research objectives:

- To explore and define the concept and components of enterprise risk management.
- To identify and examine the criteria commonly employed to assess the effectiveness of enterprise risk management.
- To investigate and determine the critical success factors that contribute to the effectiveness of enterprise risk management procedures.
- To assess and analyse the impact of the COVID-19 risk management strategy on the XYZ PHC facility's performance.
- To develop recommendations and strategies to enhance the XYZ PHC facility's enterprise risk management approach in order to effectively handle future risks, particularly those similar to COVID-19.

1.5 Research methodology

This section provides an explanation of the research methodology used in this study, including the sample strategies, data sources, data collection methods, and research design.

1.5.1 Research design

Pragmatism is the paradigm used in this study. Greek literature is the source of the word "pragma," which is the root of the word "pragmatic" and denotes action (James 2000:1993-202). In English, "pragmatic" is associated with seeking practical and feasible solutions to complex human problems (Fishman 1991:353-363). Consequently, pragmatists focus on determining "what works" and identifying factors that enable problem-solving (Creswell 2003; Patton 1990). Pragmatism as a research philosophy acknowledges that there are multiple ways of understanding reality due to the existence of multiple realities (Maarouf 2019:1-12). As a result, knowledge of these many realities is obtained by combining a variety of qualitative and quantitative research techniques. The binary opposition between positivism and constructivism is rejected by pragmatics, who embrace and include both viewpoints. By combining insights from both scientific modelling and testing of empirical data (quantitative) and people who have personally experienced the phenomenon (qualitative), the researcher hopes to obtain a thorough grasp of how the topic under study manifests itself.

The mixed methods research (MMR) technique used in this study enables a more nuanced view of the research questions and findings, resulting in a conclusion that is balanced with respect to the opportunities and obstacles related to the research problem. MMR makes it easier to combine qualitative and quantitative research techniques into a single project, maximising the benefits of each technique while minimising its drawbacks.

The study uses an exploratory sequential design (ESD), to be more precise. The sequential exploratory technique entails gathering and analysing qualitative data in the first phase, then building on the findings of the first phase with quantitative data collection and analysis in the second phase. The goal of this method, according to Creswell (2009), is to support the interpretation of qualitative findings with quantitative data and results. Theoretical and conceptual frameworks such as complementarity, initiation, development, and expansion, as well as triangulation, are supportive of the MMR reasoning (Bryman 2006; Hesse-Biber 2010). This study will use a development approach to examine and enhance the understanding of the ERM procedures used at the XYZ PHC facility. Greene et al. (1989) define development as a process by which the findings of one technique are used to inform the development of the other method.

1.6 Summary of chapter

The main contribution of this chapter was to present the problem statement and the research objectives.

Table 1.1: Summary of key findings

Objectives	Primary research questions	Data collection tool		
		Literature review in Chapter 1	Qualitative data in Chapter 4	Quantitative data in Chapter 6
To evaluate the effectiveness of the risk management process utilised in formulating the	How effective was the risk management process used to develop the COVID-19 risk	1.3 : Problem statement	<ul style="list-style-type: none"> Question 26 of Qualitative tool &	Question 17 of Quantitative tool <ul style="list-style-type: none"> Findings in Chapter 6 : 6.8.1.

COVID-19 risk management strategy at the XYZ PHC facility	management strategy at the XYZ PHC facility?		<ul style="list-style-type: none"> Findings in Chapter 4 : 4.8.1 	
Secondary objectives	Secondary questions	Literature review in Chapter 2	Qualitative data in chapter 4	Quantitative data in chapter 6
To gain an understanding of enterprise risk management	What is enterprise risk management?	Section 2.4 to 2.5: Definition of ERM, benefits and limitations of ERM and ERM processes	Question 1 of Qualitative tool & <ul style="list-style-type: none"> Research findings in Chapter 4 : 4.3.1 	Question 4 of Quantitative tool & <ul style="list-style-type: none"> Research findings in Chapter 6 : 6.5.
To explore the criteria used to assess the effectiveness of enterprise risk management	What are the criteria used to assess the effectiveness of enterprise risk management?	Section 2.7: Critical success factors for effective ERM implementation	Question 22 of Qualitative tool. & <ul style="list-style-type: none"> Research findings in Chapter 4 : 4.6.1 	Question 18-19-16 of Quantitative tool & <ul style="list-style-type: none"> Research findings in Chapter 6 : 6.9.1-2.
To evaluate the critical success factors for effective enterprise risk management procedures	What are the critical success factors for effective enterprise risk management procedures?	Chapter 2.6: Measuring the effectiveness of ERM and monitoring and reviews of Department of Health's ERM	Question 19 of Qualitative tool & <ul style="list-style-type: none"> Research findings in Chapter 4 : 4.5.1-8 	Question 13-16 of Quantitative tool & <ul style="list-style-type: none"> Research findings in Chapter 6 : 6.7.1-4.

Table 1.1. gives a summary of the research objectives and its research questions as well as providing different data collections that are used and the relevant chapters and sections. In summary, sequence chapters, Chapter 2 will provide literature review of enterprise risk management concepts and frameworks, its limitation and benefits as well as Department of Health 's enterprise risk management framework and Critical success factors for effective enterprise risk management 's implementation. Chapter 3 will entail a comprehensive overview of the research design, approach, and specific data collection procedures. While Chapter 4 present the results of the qualitative method of this study thematically without interpreting them and chapter 5 analyse and discuss the qualitative findings. Additionally, Chapter 6 presents the finding of quantitative data using mainly graphs and chapter 7 focuses on analysing and discussing the findings quantitative data. Data integration is discussed in chapter 8 and conclusions and recommendations are provided in the final chapter .

1.7 Conclusion

In addition to helping other primary healthcare (PHC) facilities working in comparable environments to establish flexible and adaptable ERM plans in the event of uncertainty or crisis, achieving the research objectives will help improve the ERM processes within the Department of Health. Additionally, the research will make it easier to identify CSFs for successful ERM, which will help healthcare organisations (HCOs) develop ERM programmes that are more likely to align with the strategic goals and objectives of their company. Finally, the research will review and suggest modifications to the standards by which the COVID-19 ERM method is judged effective.

Chapter 2: Literature Review

2.1 Introduction

A literature review serves the purpose of identifying and summarising relevant studies on a particular topic (Creswell 2014:32). It involves a comprehensive examination of studies, including conceptual articles or opinion pieces that offer a framework for understanding the topic. The literature review presents the topic and gives a summary of the body of research that has been done on the issue.

Hart (1998:13–14) states that a literature review entails the selection of relevant documents that address the topic and offer ideas, facts, evidence, and information from a particular perspective in order to achieve particular goals or convey specific opinions about the nature of the topic and its investigation. It also aids in situating the research project within the broader body of literature and elucidating how the research will address gaps in the academic discourse.

The background information and introduction to this study were given in the preceding chapter. This chapter presents a literature review focusing on the theoretical concept of risk management and its associated frameworks. It describes the frameworks, instruments, and standards that will be used in this study to evaluate the efficacy of

RM at the XYZ PHC institution. Moreover, the literature evaluation creates links between the goals and purposes of this research and earlier studies carried out in the field. The chapter commences with the definitions of key concepts such as risk, hazards, and risk factors, with a particular emphasis on understanding COVID-19 infection as a risk factor within organisations. Subsequently, a detailed examination of the ERM framework is provided, including an exploration of its benefits, limitations, and procedures such as risk analysis, evaluation, treatment, monitoring, and reviews. Additionally, the measurement of ERM effectiveness is explained, and CSFs of ERM are discussed. The final section delves into the policy and procedures of ERM in the public sector in South Africa, beginning with an examination of the function of the public sector in society and how ERM is used in the field of public health.

As previously mentioned, Figure 2.1 offers a succinct summary of the extensive topics that this chapter will cover. It includes a review of enterprise risk management (ERM) and related procedures, a look at crucial success factors for implementing strategy and ERM successfully, an assessment of ERM efficacy, a look at the role of ERM in the public sector, a discussion of how ERM in organisations relates to good corporate governance by citing the King IV report's codes of best practices, and a look at ERM strategy in the FSP Department of Health's health sector. One of the most important parts of the study's data collection procedures, which are described in Chapter 3, is this literature review.

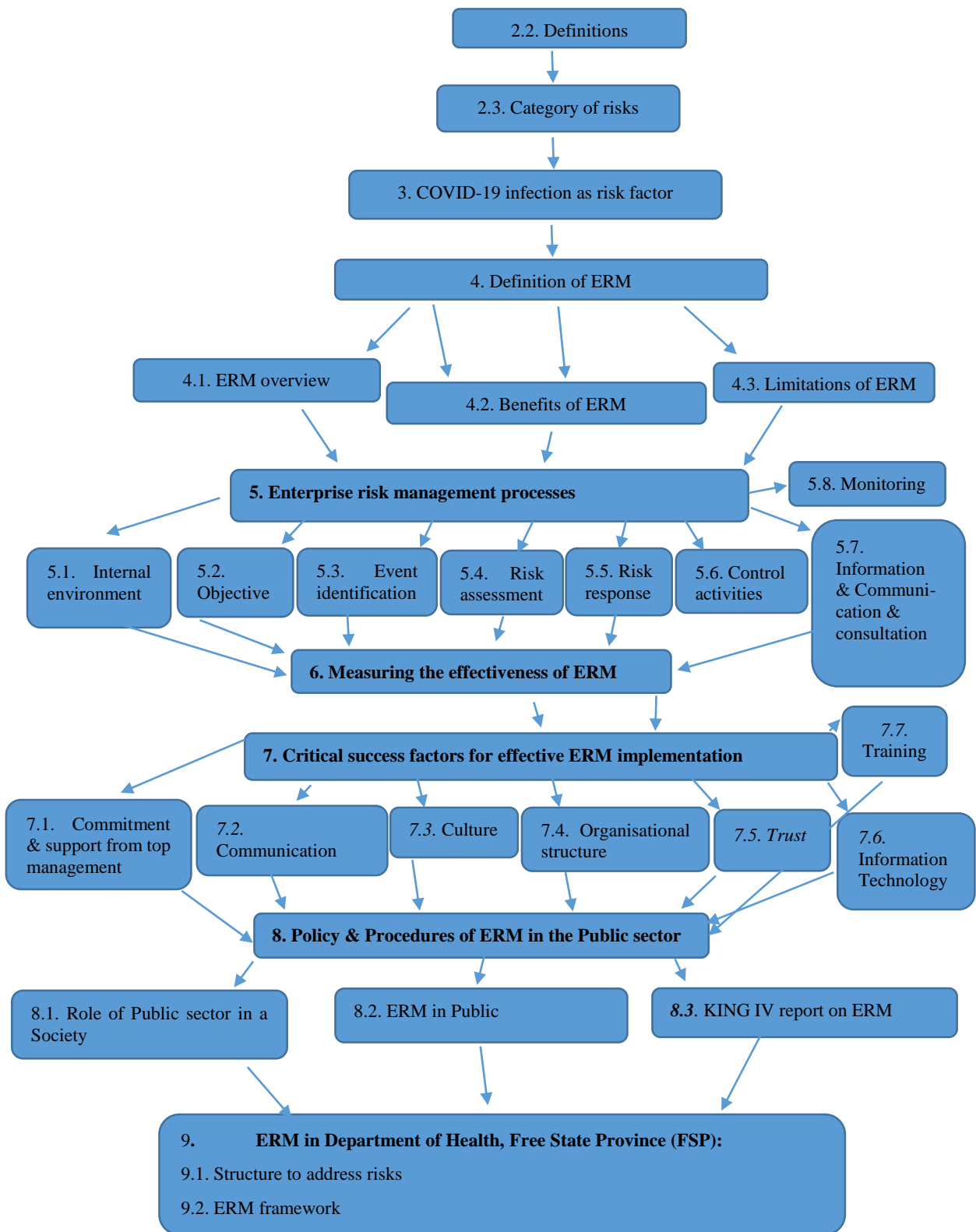


Figure 2.1: Chapter outline

2.2 Definitions

This section explains the terminology relevant to the study in order to enhance clarity and understanding. It aims to provide concise definitions and explanations of key concepts such as risk, hazard, and risk factor.

2.2.1 Risk

There are several ways to define the idea of risk. Risk is defined by Aven and Renn (2009:1–11) as the possibility of unfavourable outcomes from a particular action or occurrence that has significance for people. Conversely, risk is defined by Na Ranong and Phuenngam (2009) as the product of the possibility of an event happening as well as its possible fallout.

2.2.2 Hazard

It's critical to distinguish between hazards and risks. The term "hazards" refers to the possibility of injury or other desirable results (Governance 2005:1-67). Hazards are related to the intrinsic characteristics of a risk agent and the processes associated with it, according to the International Risk Governance Council (IRGC) (Governance 2005:20). Conversely, risks delineate the possible consequences that these hazards may have on certain targets, such structures, ecosystems, or human beings, as well as the odds that go along with them (HSA 2017).

Hazards are defined by the Institution of Professional Engineers New Zealand (IPENZ 1983:5) as elements that increase the likelihood of harm coming to persons, property, or the environment. Risks have the potential to worsen damage in terms of intensity, frequency, and/or size. As a result, a hazard may occasionally operate as a risk factor for a particular illness. Within the framework of this investigation, COVID-19 infection is a risk to one's health as well as a hazard. The COVID-19 virus is a biological hazard that exists in the environment and puts the employees of the XYZ PHC facility. Even though there is no longer a chance of infection due to the COVID-19 virus, there is still a chance of injury. The possibility that a certain exposure or set of exposures could cause or contribute to harm to people is known as human health risk, according to the Environmental Protection Agency (EPA, 2016). This was exemplified by the occurrence of COVID-19 infections during the pandemic.

2.2.3 Risk factor

According to the Collins Dictionary (2022), a risk factor is a characteristic, habit, or environmental condition that predisposes an individual to the development of a specific disease. A risk factor is defined by the World Health Organisation (WHO 2017b) as an attribute, state, or action that raises the probability of contracting a specific illness or injury. In the case of caring for and treating patients at the XYZ PHC facility during the pandemic, such activities represent a risk factor as they heighten the probability of staff members at such a facility being exposed to occupational risks associated with COVID-19 infection.

2.3 Category of risks

Both definitions of risks mentioned in section 2.2.1 incorporate the consideration of likelihood or probability and the potential consequences, whether negative or positive. These effects, whether brought on by man-made or

natural occurrences, or by both combined, might differ in intensity (Governance 2005:20). Therefore, risk is characterised by both probability and exposure.

Al-Tamimi and Al-Mazrooei (2007) distinguish between two types of risks: systemic and unsystematic risks. They define systemic risk as an inherent risk within an organisation that cannot be mitigated through modifications, while unsystematic risk refers to risks associated with individual factors that can be avoided through modifications. Four categories of risks are identified by Bekefi, Epstein, and Yuthas (2008) as present in an organisation: risks related to strategy, operations, reporting, and compliance. Strategic risks are those that impact an organisation’s strategic objectives and goals, while operational risks pertain to risks that affect processes, systems, and daily activities crucial for smooth operations. The accuracy, timeliness, and dependability of information systems, as well as the quality and comprehensiveness of data utilised for internal or external decision-making, are all related to reporting risks. Contrarily, compliance risks result from the necessity of abiding by legal agreements, policies, guidelines, and regulatory frameworks. Non-compliance might endanger an organization's finances or reputation.

The Department of Health in the FSP categorises risks into three main types: organisational risks, resource risks, and compliance risks (Department of Health 2021/22:3). Organisational risks are defined as risks that impact the department’s overall operations, while risks related to the availability and distribution of resources are known as resource risks. Compliance risks, as the name suggests, originate from the need to comply with regulatory frameworks, policies, directives, or legal agreements.

The goal of putting ERM into practice is to manage risks within the organization's risk appetite and spot possible events that could have an impact on it. This will give the organisation a reasonable assurance that its goals will be achieved (COSO 2004). The XYZ PHC facility monitors the top 10 risks, aligned with departmental outcomes, monthly through its risk management committee and quarterly through the provincial Chief Risk Officer (CRO). As shown in Table 2.1, this monitoring helps to minimise prospective losses and offers certainty about the organization's capacity to meet its strategic goals.

Table 2.1: The XYZ public health facility’s Top 10 risks and departmental outcomes

Outcomes	Residual risks	Mitigating factors	Type of risks
Giving strategic leadership and making a social influence to get better results	Dysfunctional governance (hospital board) structures	Capacity building in roles, and responsibilities and holding management accountable	Organisational risk
Increase life expectancy	Inability to increase the accessibility of PHC facility services	Prioritise the resources for theatre services	Organisational risk

Outcomes	Residual risks	Mitigating factors	Type of risks
Decreasing maternal and child mortality	Inadequate and non-compliant infrastructure for neonatal and child health	Lobby and establish infrastructure compliant with norms and standards	Organisational risk
Reducing TB prevalence and fighting HIV/AIDS	Inability to cope with increased demands for outreach services	Expand the number of ward-based team nurses to improve patient follow-up coverage	Organisational risk
Strengthening health system effectiveness through:	Increase in medical litigation cases and contingent liability	Strengthen clinical governance	Resource risk
Re-engineering of PHC system	Failure to comply with the staffing norms	Lobby and appoint critical staff	Compliance risks
Improving patient care and satisfaction	Failure to implement efficient information systems and knowledge management to meet the needs of the PHC	Migrate to a paperless MEDI-TECH system	Reporting risks
Accreditation of health facilities for compliance			
Improved human resources for health	Failure to improve ideal status due to infrastructure	Use HIV grant to fund infrastructure backlog	Resource risk
Strengthen health information management	Inability to implement audit recommendation	Allocate the budget for the audit action plan	Resource risk
	Lack of institutional researcher team	Develop standard operating procedures for the researcher team in line with departmental policy	Organisational risk

Source: The XYZ Public health care facility's AOP (2022:35)

2.3.1 COVID-19 infection as risk factor

The SARS-CoV-2 virus is the cause of COVID-19, a respiratory disease. It has the potential to be lethal and can present with mild to severe symptoms. Respiratory droplets released when an infected person coughs or sneezes are the main means of transmission (OSHA 2020:4-6). These droplets can infect individuals who are in close proximity, within a distance of six metres, or those who come into direct physical contact or provide care to an

infected person. Infection is also a possibility for people who work in crowded, indoor settings with insufficient ventilation or who come into touch with contaminated surfaces or items (WHO 2021a:2).

Biological pathogens are categorised into four risk groups based on the degree of community transmission risk and the accessibility of preventive measures (see Table 2.2). Depending on the availability of vaccines, the COVID-19 infection falls under either group 3 or group 4. It was categorised as group 4 during the first wave of the pandemic in South Africa, when vaccination distribution was restricted. HCWs faced a significantly higher risk of infection in their work settings. Studies have reported infection rates ranging from 3% to 17% among HCWs, depending on the level of exposure and the presence of symptoms (Chen et al. 2021; El-Boghdadly et al. 2020; Fusco et al. 2020; Lan et al. 2020).

Table 2.2: Biological pathogens classification

Group 1	Group 2	Group 3	Group 4
Not expected to infect humans	<p>Could represent a risk to the worker who is exposed to it and make people sick</p> <p>Not likely to spread disease to people</p> <p>Effective treatments and preventative measures</p>	<p>Cause serious health problems in people and put exposed personnel in danger</p> <p>Able to extend throughout the community</p> <p>Prophylactic and therapeutic measures that work</p>	<p>Cause serious health problems for people and put exposed workers in danger</p> <p>Able to disseminate throughout the community</p> <p>No efficient preventive measures or therapies</p>

Source: Adapted from NIOH (2019:2)

The risk of exposure and infection with COVID-19 among HCWs varies significantly depending on factors such as their specific job roles, work environments, and individual risk factors. Due of ongoing exposure to infected patients, healthcare workers (HCWs) working in designated COVID-19 wards or hospitals are at increased risk. Strict commitment to infection prevention and control (IPC) procedures, however, can reduce this risk. In healthcare settings, the virus can be significantly reduced by implementing personal protective equipment (PPE) and other IPC measures rigorously (Bielicki et al. 2020:261-267).

Outside of the hospital, HCWs are also vulnerable to community transmission during peak epidemic wave periods. HCWs may get COVID-19 through close interactions, family members that are sick, or community exposure in places with high transmission rates. HCWs are subject to a two- or three-fold increased risk of contracting COVID-19 again if they have a family member who has the virus, use PPE inadequately, or adhere to IPC guidelines less than optimally. Many infections among HCWs with mild symptoms were probably obtained in the community, according to a study done in Dutch hospitals (Reusken et al.,2020).

In healthcare settings, recognising and assessing the risk of COVID-19 infection among healthcare workers is essential to putting effective management plans into place. PPE should be used appropriately and consistently, and the type of contact determines the risk category for in-hospital exposures. FSP has developed a flow chart for suspected COVID-19 cases to facilitate early triage and screening of affected HCWs and patients. Individual risk assessment algorithms consider factors such as presence during aerosol-generating procedures, proximity to confirmed COVID-19 patients, and personal risk factors such as pre-existing medical conditions (Department of Health 2020a).

The researcher should consider several key factors when categorising the risk for HCWs (NIOH 2019:2):


- The potential source of exposure, including duration (in minutes or hours per shift) and frequency (times per day, shift, week, or month), classification of the agent (currently class 3), reservoir of the agent, environment, transmission route, and health effects.
- The actual and potential exposure of workers, including the number of workers at risk, the level of exposure, individual susceptibility, and frequency of exposure.
- The work environment, including the location, tasks, activities (e.g. COVID-19 ward, emergency ward, waiting area, conference rooms), workspace layout or design, and facility condition.
- Interactions with other activities in the area and potential impact on other workers (e.g. cleaners, maintenance workers).
- The education, training, and skills of workers who may be exposed.
- Implementation of IPC and PPE measures.

In the XYZ PHC facility, the following workplace risk levels recommended by WHO were used for rapid risk assessment of potential occupational exposure to COVID-19 (WHO 2021a:3-5):

- Lower risk: Jobs and duties involving little to no interaction with the general public or other individuals, as well as no interaction with anyone who may be infected with COVID-19.
- Medium risk: Jobs and responsibilities that require regular, intimate interaction with patients, visitors, suppliers, and co-workers but exclude any interaction with individuals who may be COVID-19 carriers.
- High risk: Jobs and duties with a high possibility for close contact with people known or suspected to be infected with COVID-19 or interaction with objects and surfaces possibly contaminated with the virus.
- Very high risk: jobs and tasks that put workers at danger of inhaling COVID-19 aerosols, such as those where patients undergo aerosol-generating procedures on a regular basis or when dealing with infected people indoors in congested areas with insufficient ventilation.

The Department of Health (Department of Health 2019) has provided guidelines on a management-based hierarchy of controls for all health facilities and HCWs in relation to COVID-19 (Table 2.3). This hierarchy of controls, as described by NIOH (2019:2), is a structured approach to controlling occupational hazards and involves five levels of action to reduce or eliminate hazards.

Table 2.3: Hierarchy of controls

Hierarchy of controls	Purpose	Action taken (e.g.)	Level of effectiveness
Elimination	Remove the hazard	Exclude potentially infectious individuals from the workplace	
Substitution	Replace the hazard	Provision of vaccination	
Engineering controls	Isolate the HCW from the hazard	Establishment of isolation wards and quarantine sites and workplace screening	
Administrative controls	Change the way people work	Developing new guidelines regarding work practice such as return-to-work guidelines and job rotations, stay-at-home policies	
PPE	Protect the worker with personal protective equipment	PPE is issued based on the results of an employer’s risk assessment and worker’s specific job task, wearing of masks	
Human behaviour	Influence human behaviour	Improve respiratory and hand washing etiquettes, avoid close contact and comply with lockdown rules	
			Least effective

Source: NIOH (2019:2)

Effective ERM aims to proactively control future outcomes rather than reacting to events after they occur. This proactive approach involves implementing a hierarchy of controls to minimise the likelihood of risks and mitigate

their potential impact. By adopting effective ERM practices, organisations can increase the likelihood of success and achieve their desired objectives while minimising the potential negative consequences.

2.4 Definition of risk management

Ennouri (2013:291) defines risk management as a process that entails decision-making to evaluate hazards that have been identified and action-taking to lessen the likelihood that unfavourable occurrences will occur. Risk management is a coordinated set of actions and techniques used to guide and control the various risks that can affect an organization's capacity to meet its goals, according to ISO 31000 (2009:2). It ensures that the organisation is aware of and understands the risks in its environment, and prepares strategies to mitigate them and prevent disasters or minimise their impact.

Risk management in organisations can be approached either in a traditional manner, treating risks as fragmented and compartmentalised, or in a holistic manner within an ERM framework. ERM allows organisations to comprehensively and coherently approach and manage all risks, avoiding siloed approaches, and helps management achieve performance and profitability targets while safeguarding resources (Bromiley et al., 2015; PricewaterhouseCoopers LLP 2004).

2.4.1 Enterprise risk management overview

An organization's ability to create value can be improved by utilising the framework that ERM offers to manage uncertainty and the risks and opportunities that come with it (Abidin et al., 2019). It is a top-down procedure that is used in strategic settings throughout the business and is impacted by the management, staff, and governance structure of the organisation (COSO 2004). By reducing risks' impact on key performance metrics, ERM connects strategy and risks (Gates, Nicolas & Walker 2012:28-29). In a similar vein, Grace et al., (2015) characterise ERM as an all-encompassing method of risk management that entails a thorough analysis of risks that are evaluated, quantified, funded, and managed at the corporate level.

Gatzert and Schmit (2016) state that there are four essential components of ERM:

- Risk strategy, which establishes objectives in line with the overarching strategic company goals.
- Risk assessment, which covers the detection, assessment, and tracking of risks.
- Risk governance, it entails setting up risk governance frameworks and procedures.
- A risk-aware culture that permeates the whole company and is successfully communicated and supported by senior management.

According to CPA (2022), the ERM framework consists of nine components, each of which is described in further detail in Figure 2.2.

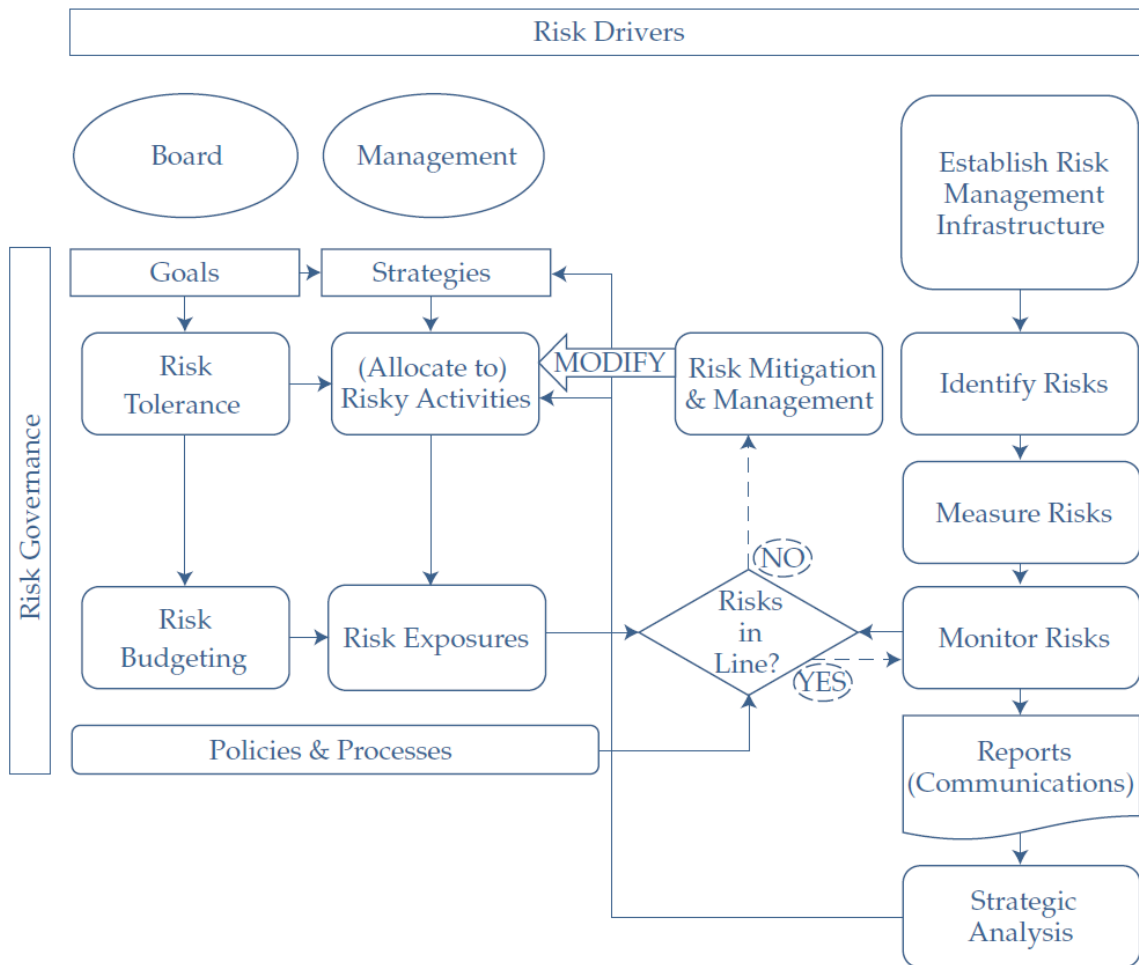


Figure 2.2: ERM framework (adapted from CPA 2022)

The nine elements of the ERM framework are as follows:

- **Risk governance:** This element assigns responsibility to the board, establishing top-level structure and policies. It establishes the organization's risk tolerance and guarantees that RM objectives and organisational strategy are in line.
- **Risk tolerance:** focuses on establishing the organization's acceptable threshold for risk appetite.
- **Risk budgeting:** Risk budgeting, which builds on risk tolerance, measures and distributes the appropriate amount of risk based on predetermined indicators. It directs how decisions on risk tolerance are put into practice.
- **Policies and processes:** Integration of policies and processes into daily operations ensures that RM is embedded within the organisation's risk strategy.
- **Risk infrastructure:** This element encompasses the people, systems, and technology that perform RM processes within the organisation.

- Risk identification and measurement: It involves a continuous RM process that identifies and measures risks. Ongoing evaluation analyses relevant risk exposures and drivers, quantifying risks into risk metrics across different contexts.
- Risk monitoring, mitigation, and management: Active and comprehensive monitoring of risks is crucial. It allows for continuous evaluation of risk exposure against desired risk tolerance levels. If necessary, risk mitigation strategies are applied to reduce exposure.
- Risk communication: Effective communication channels are established to facilitate clear and timely reporting of risk indicators or metrics to all stakeholders.
- Strategic integration and analysis: This element involves integrating RM procedures and activities with overarching strategic goals and decision-making processes. The aim is to ensure that RM adds value to the organisation's outcomes.

These elements are supported by important traits and ideas, such as:

- Consolidated organisation-level perspective that manages risk as a portfolio.
- Alignment with business strategy.
- Explicit procedures for measuring, tracking, assessing, and managing risk.
- • Strong risk culture conveyed throughout the organisation, together with active support from senior management (Moshesh, Niemann & Kotzé 2018).

As Bowling and Rieger (2005) have shown, top management's (TM) support is essential to the effectiveness of ERM. The importance of TM in efficient risk management systems was further highlighted by Beasley, Clune, and Hermanson (2005). The integration of risk management strategy and philosophy across the entire organisation is made possible by TM assistance. Strong support from TM is necessary for the application and effects of corporate risk management (Walker et al. 2002:4–14). Employee acceptance and adoption of the ERM system is higher when TM and the board of directors actively participate in the risk management process (Brown et al. 2009). Consequently, a collaborative risk management framework cannot succeed unless the entire company is involved.

2.4.2 Benefits of enterprise risk management

ERM may improve a company's competitive business advantage by identifying, estimating, treating, monitoring, and communicating risks (Jalal-Karim 2013). It can also help a company absorb a higher level of risk, reduce inefficiencies, and gain from diversification (González, Santomil & Herrera 2020). Additionally, according to Rubino (2018:203-210), ERM makes it possible to comprehend a company's operations better, both positively and negatively. This increases the likelihood that the organisation will succeed by eliminating doubt about its objectives.

A customisable or adaptable RM framework has the potential to greatly increase the sustainability of small, non-franchised businesses in the fast-food sector, as Bruwer (2013:999–1030) has shown. Furthermore, as per Gates et al. (2012), Enterprise Risk Management (ERM) enhances management and overall performance by improving organisational efficiency, resource allocation, and risk understanding. The claim that ERM permits precise resource allocation and expedites a reaction to recognised and emergent risks—both of which may lead to higher profitability—is likewise backed by Baxter (2013). Furthermore, ERM reduces duplication of RM expense by integrating decision-making about various risks across the organisation, according to Hoyt and Liebenberg (2011).

The Committee of Sponsoring Organisations of the Treadway Commission (COSO 2017) lists the following as additional advantages of enterprise risk management (ERM): expanding the pool of opportunities, recognising and controlling risk across the entire organisation, boosting positive outcomes, decreasing unpleasant surprises, lowering performance variability, enhancing resource deployment, and strengthening enterprise resilience.

2.4.3 Limitations of enterprise risk management

When ERM is implemented, there are certain limitations and challenges that organisations may encounter. Dafikpaku (2011) has identified four challenges that can arise during ERM implementation:

- **Human weakness:** A number of variables, including time restraints, information accessibility, and commercial pressure, can impact ERM decisions and the decision-making process.
- **Implementation breakdown:** During deployment, a well-designed ERM framework may encounter malfunctions as a result of key staff misinterpreting instructions or thoughtless or tired decision-making.
- **Cost considerations:** The focus on cost considerations over the benefits of ERM can have a negative impact on its successful implementation.
- **Non-compliance and collusion:** For personal benefit, managers may knowingly stray from established ERM protocols and guidelines, and staff members may conspire to falsify important financial and managerial data that is essential to the implementation of ERM.

From the perspective of COSO's ERM framework (2004:93), three important concepts should be considered when discussing the limitations of ERM:

- **Inherent uncertainty:** Risk is inherently uncertain as it pertains to the future.
- **Reasonable assurance:** ERM can only provide reasonable assurance and does not guarantee the achievement of objectives.
- **Absence of absolute assurance:** ERM cannot provide absolute assurance regarding the outcomes related to any specific objective.

Furthermore, Moshesh et al. (2018:236) identified eight challenges in ERM implementation, and which may be categorised into three primary themes: organisational misalignment, human resource development, organisational

design, and one overall theme related to information technology support for ERM. Each theme encompasses various challenges that organisations may face during the implementation process.

2.4.3.1 Organisational misalignment

Organisational misalignment occurs when an organization's strategy, values, and beliefs are not aligned, which could cause conflict, a lack of cooperation, and instability (Martins & Solé 2013).

2.4.3.1.1 Lack of management buy-in for enterprise risk management

The difficulties encountered by the petrochemical supply chain during the adoption of ERM were goal misalignment, a lack of management buy-in, and change management, according to Moshesh et al. (2018:236). Low or non-existent management involvement in suggested changes is referred to as lack of buy-in (Schlak 2015). This is frequently the result of a lack of comprehension of the ideas underlying the implementation of ERM (Renault, Agumba & Balogun 2016).

2.4.3.2 Human resource development

According to Wilson (2014), human resource development is the systematic and planned actions created by an organisation to give its members the chance to get the skills they need to fulfil present and future employment demands.

2.4.3.2.1 Vague job descriptions

According to Arnaboldi and Lapsley (2014), functional managers, whose current responsibilities already include risk management at the managerial level, and ERM champions find it difficult to work together when roles are not clearly defined. They state that an organisation that lacks an organogram outlining roles and duties and clear communication channels will have difficulty implementing ERM effectively. According to Moshesh et al. (2018:236), inadequate training of staff members and other important facilitators in charge of ERM advocacy and implementation can also result in misunderstandings about the roles and duties of individuals engaged.

2.4.3.3 Organisational design

According to Mohrman and Lawler (2014), organisational design is the intentional arrangement of an organization's procedures and structures to meet its goals.

2.4.3.3.1 ERM rigidity

Although ERM inflexibility guarantees uniform handling and reactions to hazards (Baxter 2013), It can also lead to inflexibility in meeting risk management requirements due to differing levels of risk tolerance and appetite across industries and sectors (Moshesh et al. 2018).

2.4.3.4 Information technology

According to Abraham (2012), information technology is the set of instruments that make it possible to make decisions by obtaining, storing, modifying, and disseminating data.

2.4.3.4.1 Lack of appropriate information technology tools

In their study, Moshesh et al. (2018:240) noted that one of the challenges was the absence of a suitable information technology instrument to facilitate the adoption of ERM. Given the critical role that information, information systems, and IT governance frameworks play in businesses, the absence of an effective information technology tool can lead to a lack of integration, which represents a serious weakness in the risk framework (Rubino 2018:203-210). The difficulty in locating an appropriate framework for ERM implementation backed by a suitable IT system is also confirmed by Dornberger et al. (2014). A PwC poll from 2016 provides an example of this: almost 58% of boards stated that they did not get updates on the company's risk exposure at every meeting, which caused a misalignment between the operational and strategic functions (Rubino 2018:209).

2.5 Processes of ERM.

Risk Management process, as defined in AS/NZS ISO 31000 (2004), provides a structured approach to managing risk. A procedure is an established or official way of doing something, involving a sequence of acts carried out in a particular order or manner, according to the Cambridge Dictionary (2022). Risk assessment, analysis, evaluation, treatment, monitoring, and review are all included in the risk management process (RM). To ensure effective implementation of the RM process, it should be managed in a uniform and focused manner.

Standards Australia/Standards New Zealand (2004) and the International Organisation for Standardisation (ISO 2008) propose that RM should be based on three key fundamentals (as depicted in Figure 2.3):

- A set of guidelines outlining the fundamental qualities of effective risk management.
- An RM framework that offers an organised approach to RM.
- An RM *process* that offers a customised, methodical strategy for comprehending, conveying, and effectively managing risk in real-world situations.

AS/NZS ISO 3100 proposes eight *key principles* for good RM (as shown in Figure 2.3):

- It ought to be an essential component of organisational procedures.
- It ought to be structured and approached systematically to improve efficiency and provide consistent results.
- In order to accomplish organisational goals, it should be adjusted and personalised to the organization's internal and external circumstances.

- It should be transparent and inclusive, allowing for stakeholder participation and involvement.
- It should be dynamic and responsive to changes in different settings and conditions.
- The most up-to-date information should serve as its foundation.
- When making judgements, it ought to take into account cultural and human aspects.
- It need to support ongoing enhancements and the achievement of organisational objectives.

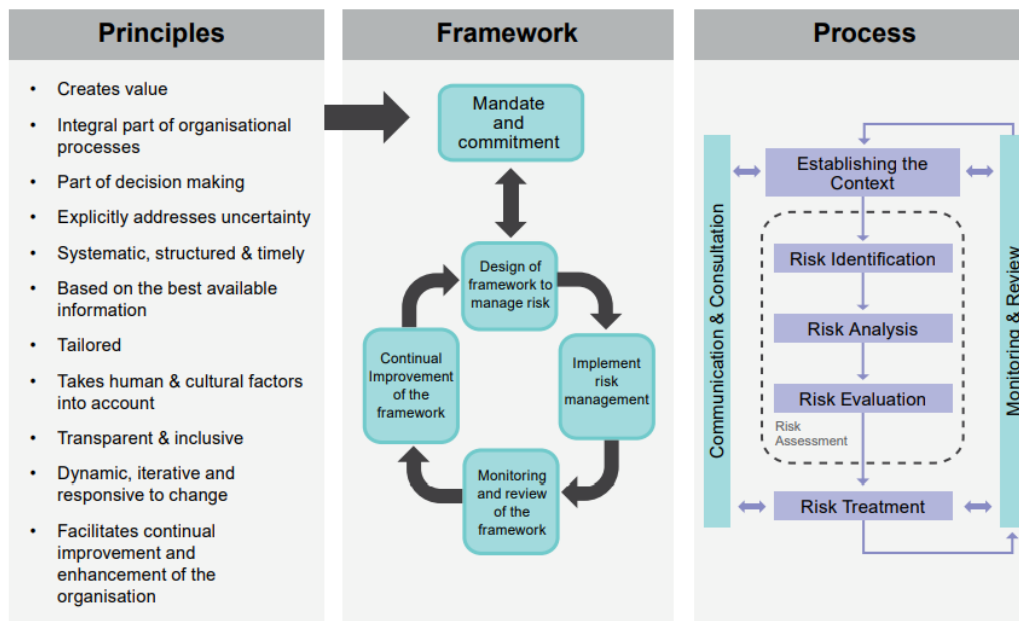


Figure 2.3: AS/NZS ISO 3100 risk management (2004)

Source: Adapted from Department of Health (2020)

According to the State Bank of Pakistan (SBP 2003), an *ERM framework* should encompass the scope, processes, systems, and procedures for managing risks. It should specify each participant's specific duties and responsibilities in the ERM process. In order to ensure efficacy, the framework should also have policies and procedures covering risk acceptance, measurement, monitoring, reporting, and control.

Three components should be included in the ERM procedures, according to the National Institute of Standards and Technology (NIST) (2004): risk assessment, risk mitigation, and evaluation and assessment. Identification of hazards, assessment of possible effects, and recommendation of risk-reduction strategies should all be part of the risk assessment process. Risk mitigation comprises deciding which risk-reducing measures to prioritise, keeping them up to date, and putting them into action. Continuous evaluation should be the goal of the evaluation and assessment process.

Rubino (2018) identifies four frameworks for risk management that have a strong structure and are simple to assess. These frameworks include of COSO ERM, ISO, AS/NZS, and the Framework for the Management of Risk (Canada). Table 2.4 presents a comparison of different systems.

Table 2.4: Comparison of frameworks

Phases	Framework for the Management of Risk - Canada	ISO 31000 (2009 and 2018)	AS/NZS 4360 2009	COSO ERM 2004	COSO ERM 2017
1	Planning and Designing the Approach and Process	Establishing the Context	Establishing the context	Internal Environment Objective Setting	Governance and Culture Strategy and Objective-Setting
2	Implementing Integrated Risk Management	Risk assessment Risk treatment	Risk assessment Risk treatment	Event Identification Risk Assessment Risk Response	Performance
3	Practicing Integrated Risk Management	Monitoring and review Communicate and consult	Monitoring and review	Control Activities Monitoring	Review and Revision
4	Continuously Improving Integrated Risk Management	Recording and reporting*	Communicate and consult	Information and Communication	Information, Communication and Reporting

* This component was comprised only in the ISO 31000:2018.

Source: Adapted from Rubino (2018:207)

2.5.1 AS/NZS 4360 framework

The Joint Standards Australia/Standards New Zealand Committee - Risk Management first released the AS/NZS 4360 framework in 1999. Since then, it had updates in 2004 and 2009. This framework can be used by a variety of organisations, associations, groups, and individuals, as well as public, private, and community enterprises. It provides general rules and concepts for risk management. It applies to all phases of an organization's lifecycle and encompasses a broad variety of tasks like planning, making choices, operations, projects, procedures, products, services, and assets. It is noteworthy that the standard offers general suggestions rather than attempting to impose organizational-wide uniformity in risk management methods (Rubino 2018). Eleven principles that ISO adopted are included in the most recent version of the framework to improve its application.

2.5.2 ISO 31000 framework

The ISO technical committee on risk management unveiled the ISO 31000 framework in 2009. For those in charge of updating the Australian/New Zealand risk management standards (AS/NZS 4360), it provides a framework for decision-making (Javaid & Iqbal 2017). 2018 saw the revision of the standards to help businesses enhance their risk assessment, planning, and decision-making. The significance of top management leadership in risk management, ongoing engagement with the external environment, and interactive risk management is underscored by the recently introduced ISO 31000 framework. The goal is to increase the efficacy of risk management while making it simpler (IRM 2018b). As with AS/NZS 4360, the goal of these standards is not to mandate that risk management procedures be followed by all businesses (Rubino 2018).

2.5.3 Framework for the Management of Risk – Canada

In 2010, the Integrated Risk Management Framework (2001) and the Integrated Implementation Management Guide (2004) were superseded by the Framework for the Management of Risk – Canada. This framework was created with public administrations in mind. By using risk-based data to enable more efficient decision-making, it

helps federal governmental entities respond proactively to change and uncertainty. Departments and agencies can customise management systems to meet their unique goals and requirements by using the risk-based approach. The framework covers the special traits and management needs of public administrations through a set of guidelines and checklists.

2.5.4 COSO (2004) Enterprise Risk Management framework

In order to help organisations protect and enhance stakeholder value, the COSO (2004) Enterprise Risk Management (ERM) framework was created. This methodology combines risk-adjusted strategy and objective development with value maximisation techniques. It is made up of four kinds of objectives, eight interconnected components, and four enterprise levels. To help managers comprehend, rank, and evaluate the risks that their organisations face as well as the effects such risks have on company performance, the COSO ERM framework was updated in 2017. The necessity for improved ERM integration at the strategic level (Bromiley & Rau 2016), the complexity of implementation (Bromiley et al. 2015), and the shifting external business environment (COSO 2017) all made the update necessary.

The growth of enterprise risk management and the need for organisations to improve their risk management procedures to satisfy the needs of a changing business environment are reflected in the COSO ERM framework (2017). It gives managers and stakeholders more confidence by offering a clear framework for executing enterprise risk management in any kind of organisation (Bowling & Rieger 2005). The framework also seeks to improve the standard's comprehension and application by streamlining, clarifying, and strengthening its integration with corporate management. Twenty principles are included, organised into five categories: information, communication, and reporting; strategy and goal formulation; performance; review and revision; and governance and culture. It also provides recommendations for enhancing cyber risk management and highlights the value of reporting to help staff members at all levels comprehend the connections between risk, culture, and performance as well as how to make better decisions for strategy and goal-setting, governance, and daily operations (COSO 2017).

2.5.5 Common features of RM process

According to Rubino (2018:203-210), all four frameworks share four main phases that characterise the key risk management process. These phases are outlined in Table 2.4.

2.5.5.1 Understanding the organisation and its internal and external context

This phase encompasses three areas. First, the organisational environment includes the risk philosophy of top management, the levels of risk acceptability, the risk culture and behaviour exhibited by individuals at all levels of the company, managerial style, integrity and ethical values, skills, delineation of authority and responsibility, and the presence of appropriate policies and procedures (Rubino 2018:203-210). Secondly, the *external context* encompasses various factors such as the social and cultural environment, political landscape, legal and regulatory framework, financial considerations, technological advancements, economic conditions, natural environment, and competitive landscape, both at international and local levels. Thirdly also entails being aware of the major forces

and patterns influencing the organization's goals as well as the opinions and principles of outside stakeholders (Rubino 2018:203-210).

The last goal of goal setting is to successfully integrate the risk management role into the company. This entails outlining the organization's goals and core values, which in turn promotes a culture that is supportive of risk management. It also involves outlining the required authority, duties, resources, and record-keeping standards (Rubino 2018:203-210).

2.5.5.2 Risk management activity

This is a very important step in the risk management process. First, it entails locating occurrences that could affect the organization's ability to accomplish its goals, both internal and external. These occurrences are further divided into opportunities (those having a favourable effect) and hazards (those having an unfavourable effect). While risks need to be thoroughly analysed to develop the best management methods, opportunities must be assessed within the framework of the organization's strategic planning process (Rubino 2018:203–210).

Secondly, risk assessment is a part of the procedure. Prioritising risks should be done in accordance with how likely they are to occur and how they might affect things. To comprehend the total risk profile, inherent risks—risks that arise from no intervention at all—and residual risks—risks that persist after taking steps to reduce risk—are evaluated (Rubino 2018:203-210).

Finally, after identifying the most important risks, management needs to evaluate the best course of action for each risk. These reactions could entail sharing, lowering, accepting, or avoiding risks. In order to match the organization's risk appetite and tolerance with the recognised hazards, actions are taken. The selection and application of appropriate options to modify the risks are necessary for risk response or therapy (Rubino 2018:203-210).

2.5.5.3 Control activities and monitoring

Developing and putting into practice policies and processes that guarantee the efficacy of risk responses is essential to effective risk management. In this stage, control actions are quite important (Rubino 2018:203-210). Identification of possible events or risk factors, modification of current policies and procedures or introduction of new control processes, and ongoing assessment of the efficacy of controls put in place are all included in control activities. In light of the internal and external context of the organisation, it is imperative to routinely evaluate the accuracy, utility, and sufficiency of the control actions (Rubino 2018:203-210).

2.5.5.4 Information and communication

Continuous communication with internal and external stakeholders is necessary for effective risk management, and regular, thorough reporting of risk management performance is also necessary as part of good governance. To enable all relevant persons inside the business to carry out their obligations, it is imperative to locate, gather, and distribute information in a timely and suitable manner (Rubino 2018:203-210). Information systems are essential for producing reports with the operational and financial data required to meet legal and regulatory requirements as

well as to make managing and controlling business operations easier (Rubino 2018:203-210). These systems process data that is generated internally as well as external events, activities, and circumstances, all of which are necessary for financial reporting and well-informed decision-making. Internal communication procedures are crucial because they dictate how information is disseminated and tracked inside the organisation. The quality of the information system, which can be formal or informal in nature, has a significant impact on how well information and communication processes work (Rubino 2018:203-210).

2.5.6 Key differences of RM process

The risk management process differs in the following important ways:

1. In the **first phase**, the only framework with two components is COSO ERM. However, the emphasis on governance, strategy examination, execution, and associated risks differs significantly between the COSO ERM versions published in 2004 and 2017. The other frameworks point to a single piece that falls short of containing every element needed for phase 1. They don't specifically cover, for example, human resource competencies, management style, governance elements, codes of conduct, or the delineation of authority and responsibility.
2. In the **second phase**, the frameworks are not significantly different from one another. The "performance" component of COSO ERM 2017 incorporates all of the components of the earlier frameworks. The notion that risk management across the entire company contributes to maintaining and enhancing performance is emphasised in the new ERM document.
3. The frameworks' **third phases** are identical to one another.
4. In **phase four**, two key concepts are introduced by COSO ERM (2017). The first principle is concerned with information use and management, particularly information system management and related dangers. The second concept deals with reporting practices that help staff members at all levels comprehend how risk, culture, and performance are related to one another. Its goal is to enhance decision-making in governance, daily operations, and strategy and goal formulation (COSO 2017).

Rubino (2018) asserts that COSO ERM is the most exhaustive and full set of standards. The COSO ERM (2004) framework, which has eight components—internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring—will be used for this study even though COSO ERM (2017) is more current and comprehensive than previous frameworks (Rubino 2018). Figure 2.4 illustrates this framework.

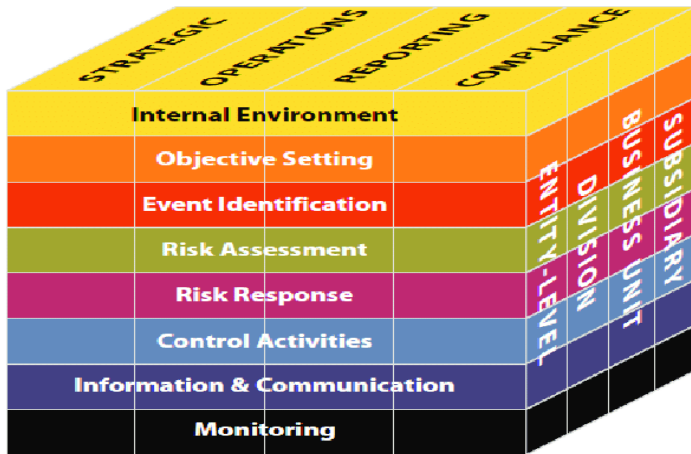


Figure 2.4: COSO Enterprise Risk Management (2004) Management Cube

Source: Adapted from COSO ERM (2004)

2.6 COSO Enterprise Risk Management 2004 framework

This section discusses the COMO ERM 2004 framework.

2.6.1 Internal environment

An organization's internal environment establishes the tone and shapes its employees' risk awareness. It provides structure and discipline and acts as the cornerstone for all other enterprise risk management components. The organization's risk management philosophy, risk appetite, board of director's oversight, personnel competence and integrity, authority and responsibility delegation, and workforce organisation and development are all examples of internal environment factors (COSO ERM 2004:26–34).

2.6.2 Objective setting

Strategic goals serve as the foundation for goals related to operations, reporting, and compliance. Every company faces a variety of risks, both internal and external. To effectively identify events, assess risks, and respond to them, objectives must be created. The organization's risk appetite, which establishes its degrees of risk tolerance, should guide the alignment of objectives (COSO ERM 2004:36–40). In this step, the organization's strategic objectives and mission are connected.

High-level goals that complement and support the purpose and vision of the company are known as strategic objectives. They show the decisions made by management regarding how the company would generate value for its stakeholders. In addition to developing strategy and establishing relevant goals for operations, compliance, and reporting, management also sets strategic objectives. An organization's strategy and goals may change in response to changing internal and external circumstances, even if its mission and strategic objectives are often stable.

Choosing the appropriate goals for each activity that complement and harmonise with the chosen strategy is essential for success. An enterprise can create objectives at the operational and organisational levels that support

value generation and preservation by giving strategic objectives and strategy top priority. Establishing goals enables management to pinpoint vital success factors—essential components that must be fulfilled in order for aims to be attained. There are several degrees of critical success elements, including departmental, business unit, organisational, and individual responsibilities. Management can create performance measurement standards that emphasise crucial success aspects by defining objectives (COSO ERM 2004:36–40).

According to COSO ERM (2004), there are four main objectives of enterprise risk management:

- **Strategic objectives:** These goals are in line with the organization's mission and purpose. They represent high-level goals that contribute to creating an overall vision and achieving desired outcomes.
- **Operations objectives:** These goals centre on how well and efficiently the organisation runs its activities. They include objectives for productivity, financial gain, and safeguarding resources from depletion. Depending on the choices management makes about performance and structure, operations goals may change.
- **Reporting objectives:** These goals are related to the organization's reporting integrity. They include reporting from both internal and external sources and could contain both financial and non-financial data.
- **Compliance objectives:** The organization's compliance with relevant rules and regulations is important to these goals. External influences might impact compliance objectives, which may be comparable across different businesses or within particular industries.

Since reporting and compliance goals are under the organization's control, effective enterprise risk management offers a fair level of assurance that the goals will be met. Furthermore, by guaranteeing prompt awareness of progress towards strategic and operational objectives, enterprise risk management can offer reasonable assurance to management and the board (COSO ERM 2004:36–40).

2.6.3 Event identification

Event identification is a critical step in the risk management process when it comes to COSO ERM (2004). Any incident or occurrence, whether from internal or external sources, that could affect how a strategy is implemented or goals are met is referred to as an event. Events may have favourable or unfavourable effects, thus it's critical for management to recognise this and evaluate the situation appropriately.

In the event identification phase, management recognises the presence of uncertainties even in the absence of exact knowledge about the occurrence, timing, or consequences of an event. Identifying a variety of possible events is the main goal, regardless of whether they will have a favourable or bad effect. This enables management to recognise opportunities that can be included into the organization's strategy and goal-setting procedures, as well as hazards that must be evaluated and managed. The events that have been found can range in importance from insignificant to extremely important (COSO ERM 2004:40-6).

It is crucial to keep this procedure distinct from the evaluation of the chance and impact of events, which is dealt with in the risk assessment phase, in order to guarantee thorough event identification. Events are affected by both internal and external causes, which should be considered. The operational, cultural, political, legal, regulatory, financial, technological, and economic facets of the organization's working environment are all considered external variables. It's also important to take important trends, drivers, and external stakeholders' expectations into account. Conversely, internal variables encompass occurrences pertaining to technology, people, procedures, and infrastructure (COSO ERM 2004:40-6).

Different tools and strategies can be used by organisations as part of their event identification process. This can involve using technology-based tools to create interactive group workshops that offer assistance to participants. Techniques for identifying events can include both looking backward and planning ahead. The sophistication and application of techniques within an enterprise can differ. By performing in-depth data analysis, some methods take a top-down viewpoint, while others take a bottom-up one. Using risk categories, connecting risks to predetermined objectives, or taking the organization's opportunities and threats into account to identify pertinent risks are common approaches (COSO ERM 2004:40-6).

2.6.4 Risk assessment

An organisation assesses the possible influence of events on the accomplishment of its goals during the risk assessment phase of the COSO ERM framework (2004). When assessing risk, both the possibility and the impact of events are taken into account. Usually, a combination of qualitative and quantitative methodologies is used. Using a matrix, sometimes known as a "risk heat map," is a popular method where each cell is given a severity rating and the outcomes and probability of events are represented on different axes (COSO ERM 2004:48-66).

The possibility that an event will occur is known as its likelihood, and it is frequently described qualitatively as high, medium, or low. As an alternative, it can be quantitatively described using numerical metrics, frequencies, or percentages (COSO ERM 2004:48-66). While risks with a high likelihood and large potential impact deserve serious assessment, management recognises that hazards with a low likelihood and moderate potential impact may not require further attention (COSO ERM 2004:48-66).

Risk assessment looks at possible occurrences' positive and negative effects on an individual basis or by category for the entire organisation. Risks are assessed according to both their inherent and residual characteristics. When an organisation faces risk and management does not take any action to change the risk's possibility or impact, the risk is said to be inherent. Conversely, residual risk is the risk that still exists after management has taken the necessary action to address it. After developing risk responses, management moves on to evaluate residual risk, which is the first step in the assessment process (COSO ERM 2004:48-56).

2.6.5 Risk response

Management must decide on the best course of action after assessing the pertinent risks. Risk acceptance, sharing, lowering, and avoiding are among the options. Management considers the possible effects on risk likelihood and severity, as well as the costs and rewards that come with each option. Choosing a response that reduces residual risk to within the targeted risk tolerances is the aim. Management also takes a broad view of risk throughout the

organisation and looks at any possibilities that might present themselves, making sure that the total residual risk is in line with the organization's tolerance for risk (COSO ERM 2004:56–60).

The different risk response categories are as follows:

- Avoidance – This means stopping any behaviours that put you at risk. It could entail selling off a segment, turning down growth into new markets, or ending a particular product line.
- Reduction – Measures are implemented to reduce the possibility, the effect, or both of risk. This frequently entails making a range of standard business decisions.
- Sharing – Transferring or distributing some of the risk lowers its impact or possibility. Purchasing insurance, taking part in hedging transactions, or outsourcing specific tasks are examples of common strategies.
- Acceptance – There is no particular activity done to change the probability or effect of risk.

The avoidance strategy was chosen because there was no other practical way to sufficiently lower the risk's impact and likelihood to a manageable level. Responses that reduce and share risk attempt to bring the remaining risk inside the targeted risk tolerances, whereas responses that accept risk imply that the intrinsic risk is already within the predetermined risk tolerances (COSO ERM 2004:48-56).

After selecting a risk response, management might need to create an implementation strategy in order to carry out the reaction successfully. The establishment of controls to guarantee the correct execution of the risk response is a critical component of this strategy. Because of resource restrictions, unpredictability in the future, and intrinsic limitations of all activities, management recognises that residual risk will always exist to some extent (COSO ERM 2004:48-56).

2.6.6 Control activities

The rules and procedures put in place to guarantee that management's risk responses are carried out successfully are referred to as control activities. These actions take place at every level and in every capacity inside the company. They cover a wide range of tasks, such as asset security, segregation of roles, operational performance assessments, authorizations, verifications, and reconciliations (COSO ERM 2004:60–66).

Management chooses risk responses and then determines what control actions are required to guarantee that these responses are executed correctly and on schedule. There are numerous ways to characterise and categorise control operations, including management, computer, manual, preventive, and detective controls. Control activities typically comprise two components: procedures that operationalize the policy and a policy that specifies what ought to be done. Information technology infrastructure, software development, acquisition, and maintenance, security management, and information technology management are all covered by general controls (COSO ERM 2004:60–66).

2.6.7 Information and communication

Effective communication and consultation are essential components of enterprise risk management, as it is impossible to achieve in isolation. As a result, effective communication is essential at every step of the ERM process. One method of communicating risks is through formal risk reporting. Promoting stakeholder engagement and accountability, utilising information to reduce uncertainty, satisfying stakeholder needs for assurance and reporting, integrating pertinent expertise throughout the process, and informing other organisational processes like corporate planning and resource allocation are just a few of the characteristics that make up effective risk communication (COSO ERM 2004:66–74).

Diverse stakeholders have varying expectations and requirements when it comes to communication. Effective risk communication adapts its strategy to meet these particular needs. Organisations usually collect and use current and historical data to facilitate successful business risk management. Tracking actual performance versus goals, plans, and expectations is made possible by historical data. It gives managers insight into how the business performs under various circumstances, enabling them to see trends and correlations and project future performance. Additionally, historical data can act as an early warning system for possible occurrences that need to be addressed by management. Organisations can evaluate if they are functioning within defined risk tolerances by using current data. This kind of information helps spot any departures from expectations and offers a real-time picture of the risks that are present within units, functions, or processes (COSO ERM 2004:66–74).

2.6.8 Monitoring

In order to detect new risks and evolving variables that may have an influence on an organization's risk appetite and priorities, the monitoring phase of ERM entails the ongoing observation and assessment of risks. ERM projects must have effective monitoring and review processes in place, and it's critical to establish who in the business is responsible for carrying them out.

The following are the main goals of risk monitoring and review:

- Recognising modifications to the external and internal environment, such as adjustments to the goals and tactics of the organisation.
- Recognising potential threats to the organisation that are new or emerging.
- Ensuring that risk treatment strategies are implemented and controls remain relevant and effective over time.
- Compiling more data to improve knowledge and handling of threats that have already been recognised.
- Examining and drawing lessons from experiences, including successes, failures, and near-misses

Monitoring can be carried out by independent assessments, continuous monitoring operations, or a mix of the two. Regular management operations include ongoing monitoring, and distinct evaluations involve particular assessments of risk-related areas. The findings and observations from monitoring and review operations should be

carefully documented and disseminated to pertinent stakeholders in order to enhance their utility (COSO ERM 2004:74–81).

2.7 Measuring the effectiveness of ERM.

In the context of Enterprise Risk Management (ERM), effectiveness pertains to the extent of achievement of the intended outcomes (Kjurchiski 2014:8; oxfordreference.com 2022). It is the capacity to produce the desired result and is determined by the degree to which quantifiable results are reached and the methods by which they are attained, rather than only by the input-output ratio (Ciocoiu & Dobra 2010:1-18). Comparing the goals that can be done with the goals that are actually achieved is how effectiveness in the public sector is measured (Veiss 2012:375). An ERM programme that is unsuccessful falls short of its goals (Rainer 2013).

Only a small number of empirical studies have focused on the successful implementation of ERM in organisations, and there is little information available in the literature regarding how to quantify the efficacy of ERM. Some of the few research on the effectiveness of ERM have been carried out by Collier et al.,(2007), Gordon et al .,(2009), Laisasikorn and Rompho (2014), Paape and Speklé (2012). Although Togok, Isa, and Zainuddin (2014:28–48) provide insight into the successful application of ERM, there is disagreement over the right measuring device.

Collier et al. (2007) used broad categories of practice as independent variables rather than particular instruments to investigate RM practices at a high degree of aggregation. Their study examined the efficacy of risk management (RM) advice in UK local authorities, measuring effectiveness along lines such the RM function's structure and risk management procedures (risk identification, risk register, reporting, and independent review, for example). Additionally, respondents categorised their organisations as egalitarian/risk conscious, hierarchical, individualist, fatalist, or risk sceptical. The study found that knowledge management is essential to risk management and that integrating the concepts into operational procedures can lead to an effective implementation of risk management.

In their analysis of ERM effectiveness, Paape and Speklé (2012:533-564) centred on the connection between certain RM design decisions and how those decisions affected the perceived efficacy of RM. On a ten-point rating system, respondents were asked to assess the calibre of their RM. Nevertheless, this method, which relies on a single-item survey, merely records the opinion of the respondents regarding the contribution of the RM system to the organization's stated or implied RM goals. This technique is limited by the absence of a precise definition for an RM system and the characteristics that should be part of the quality assessment.

However, in a study by Arnold et al., (2011:171–1888), participants rated the strategic efficacy of their company's ERM practices using a five-point grading system. To evaluate the ERM process, five statements were created, including:

- At least once a year, the organisation conducts a comprehensive enterprise-wide risk assessment.
- The effectiveness of our internal control system improves our organization's capacity to recognise situations that could compromise the accomplishment of our goals.

- The organisation conducts routine assessments of the efficiency of internal controls to reduce risks that have been identified.
- Management has efficient procedures to address risks that are recognised.
- The information required for tracking changes that might have an effect on the health of our organisation is provided by the RM procedures.

Four of the eight COSO 2004 components were seen by Jalal et al. (2011:83–92) as prerequisites for a successful ERM programme. According to their findings, there is no connection between monitoring and ERM, communication and ERM, or risk assessment and ERM. Nevertheless, after accounting for risk assessment, control, monitoring, and communication throughout the ERM implementation, they discovered a connection between control and ERM.

Furthermore, Laisasikorn and Rompho (2014:81) looked into the connection between Thai listed businesses' financial performance and an effective ERM system and performance monitoring system. They proposed that four factors—culture, procedures, structure, and infrastructure—may be used to gauge an ERM system's effectiveness. On a scale of 1 to 5, with 5 denoting the highest degree of success and 1 denoting the lowest, respondents were asked to rate the overall ERM system success score.

Although several research have evaluated the efficacy of ERM using non-financial metrics, Gordon et al. (2009:301-327) created an index known as the ERM Index (ERMI) to do so. According to COSO 2004, their index is based on how well ERM accomplishes its goals in relation to strategy.

The presence and functionality of an organization's eight components are evaluated to determine the efficacy of the ERM (COSO 2004:7). These elements also function as standards for assessing ERM's efficacy. There must be no significant flaws in the components for them to be deemed present and operating efficiently, and risks must be taken within the parameters of the organization's risk tolerance. The following four categories should be the goals of an organization's ERM system:

- Strategy: lofty objectives that further the mission of the organisation.
- Operations: effective and efficient use of available resources.
- Reporting: The organization's reporting system's dependability.
- Compliance: compliance with relevant laws and rules (COSO 2004:5).

The board of directors and management can fairly guarantee that they are aware of the degree to which strategic and operational goals are being met, that reporting is accurate, and that compliance is upheld when ERM is found

to be effective in each of these four objective categories. To evaluate whether each goal has been accomplished, proxy measurements are employed. One way to gauge the effectiveness of a strategy is to look at the standard deviation of a company's sales compared to industry sales. Asset turnover, which is computed as sales divided by total assets, can be used to gauge operational efficiency (Gordon et al. 2009:301-327).

According to Shenkir and Walker (2006), a strong commitment from senior management, a risk management mindset and appetite, integrity and ethical values, and the infrastructure and scope required for ERM are all necessary for an effective implementation of the programme. Walker (2007) also identifies common components of successful ERM, such as the involvement of upper management, the creation of risk policies and frameworks, the use of defined procedures and methods for risk identification, assessment, reporting, and monitoring, the availability of sufficient tools and resources, and the dedication of all staff members.

Several crucial success elements are listed in a webinar hosted by Deloitte Canada (2012) for an efficient and successful ERM implementation. These elements include creating a procedure for creating a risk management strategy and customising the ERM framework to the particular company. A successful implementation also requires strong executive leadership and support, the integration of ERM with business processes, a positive risk culture within the organisation, and a well-defined ERM implementation strategy that is regularly evaluated.

Abidin et al. (2019) used the features of ERM based on ISO and COSO frameworks as described in their questionnaire to conduct a study to evaluate the efficacy of ERM procedures in a corporation. The COSO ERM Framework and the ISO 31000:2009 Standard substantially correspond with the features that have been identified (Abidin et al. 2019). Roles and accountability, commitment, leadership, proper tools and information systems, communication, and reporting are some of these qualities. As a result, the following components were determined to be characteristics of efficient risk management:

- A well-established framework and set of rules for risk management.
- Support and dedication from the management team.
- A well-established group in charge of risk management.
- Clearly defined responsibilities and roles for risk management.
- Participation of employees at all organisational levels.
- Capable and sufficient resources to assist with risk management.
- Accessibility of pertinent data.
- The risk management system is reviewed on a regular and recurring basis.
- Clearly stated responsibility for risk mitigation.
- Plans for ongoing development based on the Plan, Do, Check, Act (PDCA) cycle

- A formalised reporting procedure for risk management.

These features will be used in the secondary review as part of the data gathering procedure to determine if the ERM strategy of the XYZ PHC facility integrates these pillars into its continuous risk management during the COVID-19 pandemic.

Similarly, Togok et al. (2014:38) propose that the elements that embody the ERM processes provide the next best option in the lack of a more quantitative method to gauge effectiveness. The main procedures of the ERM Programme Process Model are described by the six elements of ERM: event detection, risk assessment, risk response, control activities, risk information and communication, and monitoring. Rather than concentrating only on outcomes, Cameron and Whetten (1996) suggest utilising a multi-model approach that takes systems, processes, and outcomes into account when assessing the effectiveness of an organisation. Building on this, Togok et al. (2014:38) provide a multi-model approach to assess how well ERM manages risks. It consists of a process model, an outcome model, and a system resource model. To operationalize the outcome model in the absence of a more precise quantitative outcome, the user-perceived efficacy approach is recommended.

2.8 Critical success factors for effective ERM.

Rockart (1979:84) introduced and defined the notion of CSFs in the Harvard Business Review. CSFs stand for the small number of domains where an organisation can successfully compete if its performances are satisfactory. These areas are crucial to a business's success, and if the organization's efforts at this time are not meeting expectations, these areas will not be as successful as they may be. As a result, management must continually pay close attention to these areas and monitor their progress.

CSFs are defined by Mcleod and Schell (2004) as the internal operations of a company that have a significant impact on its capacity to meet its goals. According to Freund (1988:20–22), CSFs are a crucial idea for organisations to fulfil their goals, missions, and strategies. Yong and Mustaffa (2017) underscore the significance of CSFs in the context of efficient risk management.

Several writers have added to our knowledge of CSFs in risk management. Grabowski and Roberts (1999:704–722) distinguished four key elements—organizational culture, communication, organisational structure and design, and trust—that are required for risk reduction to promote good performance in an organisation. According to Manab et al. (2012), enterprise risk management requires five CSFs in order to generate value. These CSFs are contingent upon the dedication and backing of upper management and leadership. These elements consist of resources, organisational culture, corporate governance and compliance, cross-functional personnel, and a foundation for risk management.

Table 2.5, which was modified from Na Ranong and Phuenggam (2009), lists the various critical success factors sets that different authors have suggested be used while implementing ERM. The most complete variables for successful risk management in the financial industries, according to Na Ranong and Phuenggam (2009), are seven CSFs put out by other writers (Table 2.5). These elements include trust, communication, organisational culture,

information technology, training, and the commitment and assistance of upper management. The current investigation will take these things into account as well. We'll go over each of these elements in great depth.

Table 2.5: Critical success factors for the implementation of ERM.

Critical Success Factor	Grabowski and Roberts (1999)	Daniel Galorath(2006)	Anthony Carey(2001)	Farida Hasanali(2002)	NSW Department of State and Regional Department (2005)
1 Commitment and Support from top management		Top-level management support		Leadership	
2 Communication	Communication		Verifying your judgments		
3 Culture	Organizational Culture			Culture	
4 Organizational Structure	Organizational Structuring and Design		Change management	Structure, roles, and responsibilities	Setting clear objectives and guidelines for risk management
5 Training			Embedding risks-developing of risk training course		Training staff appropriately
6 Information Technology				Information technology infrastructure	
7 Trust	Trust				
8 others		Acknowledgment that risk is reality	The importance of sound judgment	Measurement	Implementing systems for monitoring and reviewing risks.
		Commitment to identify and manage risks	Identification issues		Allocating adequate resources
			Keep control of your reputation		
			Assessing the importance of risks		
			Remuneration issues		

Source: Adapted from Na Ranong and Phuenggam (2009)

2.8.1 Support and Commitment from top management

Sharman (2002) asserts that an organization's ability to successfully apply ERM depends on the dedication of the board and top management. Senior management's sincere and unambiguous commitment to ERM helps staff members appreciate its importance as a top priority established by the leadership. Additionally, it guarantees that risk management techniques are incorporated into the development and implementation of strategies, and that risk strategy is in line with other organisational objectives and aims (Sharman 2002). Because ERM is strategic in nature, Bowling and Rieger (2005) further state that it cannot succeed without the backing of upper management.

Beasley et al. (2005) go on to say that the success of any risk management strategy is greatly dependent on the involvement of senior management.

Their assistance makes it easier for the company as a whole to integrate risk management strategy and philosophy. For business risk management to be successful, senior management must provide unwavering support due to its strength and influence (Walker et al. 2002:4–14). Employee acceptance and adoption of an ERM system is higher when they believe that the board of directors and upper management are actively involved in and supportive of the risk management process (Brown et al. 2009). Thus, the success of a collaborative risk management system depends on the involvement of the entire company.

Young and Jordan (2008:713–725) also opine that the endorsement of changes in business procedures and the ability to make successful risk management decisions depend on the backing of upper management. Effective project outcomes are directly correlated with support from upper management, which enhances risk management decision-making. Effective risk management and responsiveness to business processes are imperatives for upper management. The dedication and backing of upper management are essential for the effective reduction or acceptance of risk.

However, a number of variables affect how well ERM is implemented. The success of ERM is positively correlated with a participative leadership style, especially when senior management actively participates in ERM activities. Top management's moral character and integrity have a direct impact on how well an ERM system works (Demidenko & MuNutt 2010). Furthermore, it is crucial to have a CRO at the senior management level in order to influence management choices and procedures as well as to build and coordinate the numerous framework processes (Waweru & Kisaka 2013:83–105). A CRO offers various advantages, including expanding risk management duties across the organization's leadership hierarchy (De La Rosa 2007) and putting into practice efficient risk management procedures (Waweru & Kisaka 2013:81-105). Establishing an ERM system and sharing risk information across the organisation are tasks that the CRO works on with other management (PricewaterhouseCoopers LLP 2004; Saeidi et al ., 2012).

2.8.2 Communication

Effective communication is an essential competency for executives and upper management. Effective managers and leaders with good communication skills may set clear expectations, goals, and objectives for both parties. Effective communication guarantees that members of the team understand and support each other's desired future state as well as the team's existing state (Clutterbuck & Hirst 2002). As a result, good risk management requires careful consideration of communication. According to Grabowski and Roberts (1999), communication is crucial to reducing risk. It offers chances for clarification, comprehension of the organization's development, and participation in talks about how to improve the organisation and the effects of various risk reduction techniques.

When developing risk management plans, transparent risk information invites staff members to voice their opinions and gives professionals a platform to share their knowledge. Risks are deeply understood by people in a variety of departments and at different levels (Kleffner, Lee & McGannon 2003). Consequently, gathering accurate and pertinent risk profile data from various sources lowers the organization's long-term exposure to material

hazards. It increases the organization's chances of success and gives it a competitive edge over competitors in the industry.

2.8.3 Culture

According to Hofstede (2001:9), culture is the collective mental training that sets one group or category of people apart from another. According to Hasanali (2002), actions are shaped by a confluence of social norms, expectations, unwritten regulations, and shared history.

Cendrowski and Mair (2009) assert that the most important element in ensuring that enterprise risk management is successfully implemented in a business is a risk-aware culture. A business organisation having shared values, beliefs, and knowledge, as well as a corporate mission, is said to be risk aware (Santori, Bevan & Myers 2007). Moreover, Rittenberg and Martens (2012) stress the necessity of incorporating a risk-aware culture into decision-making processes, particularly strategic decision-making processes.

All organisational levels must be committed to the development of a risk management culture, and it must be integrated into the business culture. According to Grabowski and Roberts (1999), risk management necessitates a synthesis of several cultures in order to produce a unified system that combines the core beliefs and values of each participating business with the requirement for a culture of dependability. The desired behaviour can be fostered by a culture that values accountability and teamwork, which promotes the sharing of individual beliefs, has meetings, and looks for consensus in order to manage effectively. Because culture can promote information transfer through contact, idea exchange, and knowledge sharing, it is important for good risk management.

People's perceptions of, attitudes towards, and responses to hazards are influenced by their culture (Theil & Ferguson 2003). Individual responsibility is encouraged by a risk culture, which defines and encourages risks for which every member of the company is responsible (Clarke 2006). It is critical to acknowledge that the organization's risk culture affects how management and every employee feel about risks since attitudes, feelings, and perceptions about risks affect how risks are handled to meet organisational goals (Rossiter 2001).

Ernst & Young (2001) have identified organisational culture as a difficulty to the implementation of enterprise-wide risk management and as a barrier to effective risk management and risk exploitation (Tillinghast, Towers & Perrin, 2002). Even if managers and staff may be reluctant to admit shortcomings, the enterprise-wide risk management plan needs to promote transparency in the organisational culture by motivating them to report concerns to the appropriate departments (Levine 2004).

2.8.4 Organisational structure

While Grabowski and Roberts (1999) suggest that RM is directly related to organisational structures' adaptability, Kleffner et al. (2003) show that organisational structure and resistance to change are among the factors contributing to the difficulties encountered during ERM implementation. A clearly defined organisational structure is necessary for ERM. When circumstances change, an agile approach or framework enables for flexible answers and swift modifications. It strikes a balance between alternative solutions' efficacy and predetermined risk boundaries.

Authority and responsibilities for risk management (RM) are delegated to suitable staff members who decide what has to be done to create and assess RM alternatives, as well as which structural method to use.

2.8.5 Trust

Building trust amongst organisation members is a critical first step in identifying and reducing alliance-related risks. Without a foundation of trust, organisations are unwilling to adopt alliance-like organisational structures that leave them open to changes in the environment (McAllister 1995). According to Grabowski and Roberts (1999), trust allows members of an organisation to concentrate on their goal without having to worry about the resources, positions, or duties of other members. Building trust encourages collaborative efforts to fulfil the objective of the company. RM is characterised by actions that foster a sense of shared commitment, and trust is a key component of effective RM. Individuals can cooperate and function as a team when they have mutual trust, which is essential for RM.

2.8.6 Information technology

According to Halliday, Badenhorst, and Solms (1996:22), information technology (IT) is made up of two parts: computer technologies (hardware and software) that facilitate the processing, storing, and distribution of an organization's data and information, and information systems (including related information) that are essential to business functions and processes. Technology acts as a link between people and information, enabling people to communicate with one another (Wong 2005).

organisations must view IT as a vital component in light of the growing competition, elevated performance standards, globalisation, and liberalisation. In order to accomplish organisational goals, IT is essential. It includes every facet of corporate operations, such as sharing information, resources, core competencies, human capital, performance management, project tasking, and communication assistance (Mutsaers, Van der Zed & Giertz 1998).

To provide effective RM, an RM information system (RMIS) is required. According to Dafikpaku (2011), the RMIS acts as a platform or instrument for risk reporting and communication. Roland (2008) proposes using IT to facilitate efficient risk management. IT has the ability to provide a vital connection between RM and business performance. Employee data security is guaranteed by restricting user access according to time, industry, activity, and personal risk. IT tools gather historical data and analyse it so that businesses can learn from their mistakes and never make the same ones again. Having access to thorough and trustworthy RM information improves decision-making. IT is therefore yet another essential component of a successful RM.

2.8.7 Training

To ensure that ERM is implemented successfully, training is essential. Employee acceptance and implementation of ERM procedures are improved when they participate in training programmes (Kleffner et al. 2003). Offering training courses to staff members at all levels aids in lowering misconceptions and fears surrounding the adoption and use of ERM.

According to Carey (2001), training is critical to an organization's ability to adapt successfully to shifting operating conditions. Creating risk education programmes and involve employees in responding to early warning systems are two examples of this. The Department of State and Regional Development in NSW (2005) highlights the need for staff to have proper training in order to integrate effective risk management into acceptable business practices. An education and training program's main goals are to increase staff members' experience and knowledge in addition to making sure they feel comfortable using the system. Through training, staff members can learn how to operate the new system as well as comprehend related procedures and how they fit into it overall—that is, how one employee's job affects the work of others.

2.9 Policy and procedures of risk management in the public sector

The public sector's risk management policies and practices are covered in this section.

2.9.1 Role of the public sector in society

The Longman Dictionary (2022) defines the public sector as all businesses and services in a nation that are owned and run by the government. These institutions are funded through public revenue generated from direct and indirect taxation, with the aim of providing public goods at affordable prices or free of charge. The public sector plays a vital role in society by ensuring equitable provision of services and fostering economic growth and stability. Public sector organisations are established by the state to generate reasonable profits while serving the needs of society. They encompass government-funded or controlled agencies, enterprises, and non-profit organisations.

The public service exists to fulfil the state's obligations towards its citizens. In South Africa, the mandate for the public service is derived from Section 195(1) of the South African Constitution (RSA 1996:1331,17), which stipulates that public administration should provide impartial and equitable services, while utilising resources efficiently, economically, and effectively. It acknowledges that public services—which include employment creation, land and agrarian reform, housing, energy supply, water and sanitation, transportation, nutrition, education, healthcare, the environment, social welfare, and security—are necessary to meet the basic requirements of the populace (RDP 1994:9).

The National Developmental Plan (NDP) (2030:406) states that the public sector must concentrate on creating a competent state and a professional public service. A competent state is described by Qobo (2020:1–9) as a political structure that functions comparatively independently of certain ideological agendas. It accomplishes well-defined goals through coordinated efforts, works successfully and efficiently, and offers services and vital economic infrastructure (Qobo 2020:1–9). Operating under a social contract with the people, a capable state has the institutional capacity, technical platforms, human capabilities, and service procedures required to meet the goals of the NDP (MTSF 2019/24:29).

The Constitution (RSA 1995:1331,18) establishes three mechanisms for public service delivery:

- Administrative agencies, such as ministerial offices, offer services to other departments as opposed to the general public directly.

- Public services are provided directly by service delivery organisations, such as government departments.
- • Statutory agencies are autonomous organisations created by the Constitution or other laws. Examples of these include the Public Service Commission (PSC) and the Auditor-General (AG). They are essential in policing and overseeing public service.

While the Department of Public Service and Administration establishes the guidelines and criteria for how the public sector should operate, the Public Service Commission is in charge of defining the values and principles of public administration and managing the public sector.

2.9.2 Risk management in the public sector

The Public Finance Management Act No. 29 of 1999 governs risk management in the public sector (PFMA 1992:2). The department's accounting officer is required under the PFMA (1999) to set up transparent, effective, and efficient procedures for internal control, risk management, and financial management. The implementation of risk management within their respective areas of authority is the responsibility of management at all organisational levels, as stated in section 45 of the PFMA (1999:45). To ensure that the risk management plan is integrated into the language, culture, attitude, and mindset of the organisation, it is imperative that it be made obvious to all authorities.

Additionally, the accounting officer is tasked with carrying out routine risk management tasks to recognise developing risks under National Treasury rule 3.2.1 (National Treasury 2021:9). This entails creating a plan to prevent fraud and using risk management to direct internal auditing activities. Additionally, risk management is used to identify the competencies that managers and employees need in order to strengthen controls and successfully manage these risks.

2.9.3 KING IV report on risk management

An essential component of organisational management is risk management. Finding a balance between risk and reward, which is essential for long-term sustainability, is one of the governing body's most difficult jobs, according to Natesan and Du Plessis (2019:1). The governing body's job is to make sure that risk governance strikes the correct balance between reward and risk so as to support organisational goals, not to eradicate risk. South Africa adheres to international best practices in corporate governance thanks in part to the King reports on corporate governance, which offer recommendations and best practices on governance concepts, structures, procedures, and operations for businesses and organisations.

According to Aggarwal (2013:1), corporate governance is the degree to which an organisation is managed honestly and openly. Corporate governance, according to the King IV report, is the governing body's application of moral and effective leadership that results in the attainment of governance outcomes including performance and value creation, an ethical culture, legitimate authority, and effective control (IoDSA 2016:61). The governing board holds the responsibility of strategically guiding the organisation in accordance with its fundamental goals and principles. In order to do this, well-informed short-, medium-, and long-term strategies must be approved and monitored while taking opportunities and risks into account (IoDSA 2016:61).

Risk and opportunity management is anticipated to have the proper scrutiny and permission from the board and its committees. They ought to concentrate on strengthening the organization's defences against threats and capacity for recovery. The disclosure of risk and opportunity management procedures, important areas of concentration, effectiveness monitoring systems, and the influence of uncertainties on future plans and performance are all emphasised in the King IV report. It suggests that the audit and risk committees have membership overlap, with the risk committee having at least three directors and the majority of non-executive directors. The King IV report assigns responsibility for risk management implementation to the organization's management, even though it makes no reference of the CRO or CEO's participation in the risk and opportunity management process.

2.10 ERM in the Department of Health, Free State Province

The Public Sector Risk Management Framework created by the National Treasury serves as the foundation for both the Department of Health's and the XYZ PHC facility's ERM procedures (RSA 2010:1–75). The National and Provincial Treasuries provide institutional RM assessment, enforcement, monitoring, and capacity building in addition to setting the norms and standards of RM for public sector institutions under its purview.

Enterprise risk management is the strategic framework that the Department of Health in the Free State Province has chosen to use for risk management. The Department of Health's risk policy seeks to foster a cooperative atmosphere that guarantees uniform and efficient risk management throughout the organisation. It is dedicated to the idea that good risk management is a fundamental management duty that is included in all managers' work plans, performance agreements, and job descriptions. But the burden of RM cannot be confined to a small group of people; rather, it falls on all of the workers in the Free State Department of Health.

One of the main tenets of ERM is its integration with the operational procedures, strategic planning, decision-making processes, and departmental culture. A key component of managerial and individual duties, risk management is also essential to internal operations at the Department of Health in the Province of the Free State. The department's overarching plan to accomplish its goals revolved around the COVID-19 RM strategy (Risk Management Strategy 2018/19:9). During a crisis like the COVID-19 pandemic, HCWs consistently provide high-quality healthcare services when an institutional RM strategy is in place. Additionally, it helps HCWs prevent burnout at work, manage psychological and physical stress, and ultimately assist the company in achieving its strategic goals.

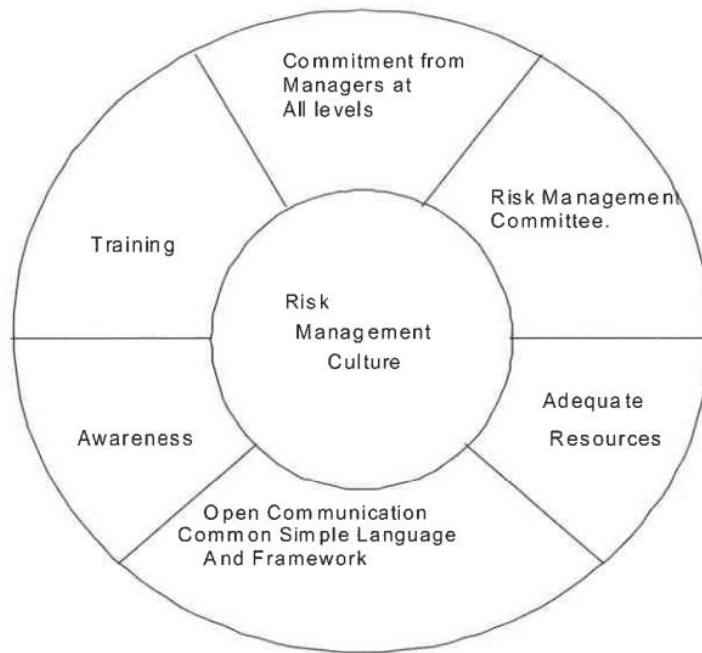
In order to reduce the transmission of the virus and its effects, an efficient COVID-19 RM strategy entails managing people, organisations, and communities at many levels of the healthcare system. Management systems researchers Ferdosi, Rezayatmand, and Taleghani (2020:215-243) characterise RM as a developing field. The healthcare industry is aware that integrating information, experience, and skills from other sectors into RM can improve healthcare services and make it possible for RM models to be systematically synthesised at the executive levels of HCOs.

The goal of the ERM strategy is to minimise possible losses and maximise benefits by identifying, reducing, and controlling risks. To increase the likelihood of success, it entails reducing speculative exposure (Na Ranong & Phuenggam 2009:4-5). Examining the CSFs of ERM utilised in other sectors is essential for any business to

succeed, and the healthcare system is no exception. These elements must be modified to account for the unique intricacies of the healthcare system and the difficulties posed by putting enterprise risk management into practice.

The essential elements for the effective application of ERM in FS health are shown in Figure 2.5. It emphasises how important organisational culture is as the connecting thread between all of the organization's ERM initiatives.

Figure 2.5: Critical success factors of RM (adapted from Department of Health 2020)



In view of Figure 2.5, the following deductions can be made:

- Every department member needs to be accountable for attaining results and assume accountability for maintaining sound risk management.
- • The department has recognised the risks it confronts and put in place a plan of action to either accept, transfer, mitigate, or lessen those risks.
- Risk Management should be integrated into the department's operations and supported by open and effective communication among staff members, as well as the provision of adequate resources to implement Risk management practices.
- • All employees should receive thorough training to improve their ability to carry out risk management tasks, such as monitoring, reporting, and gaining access to pertinent data and resources for efficient risk management procedures.

- Risk analysis should be conducted by teams and committees within the department to identify various risks and propose new mitigation responses and plans.

2.10.1 Organisational structure for addressing risks

A number of specialised committees have been established by Department of Health in FSP to supervise the execution, oversight, and reporting of RM at various levels. Determining the department's risk appetite and tolerance level, as well as outlining the duties and obligations of the FS Department of Health risk management committee, are the tasks of the departmental risk committee. Hospitals and other facilities, like the XYZ PHC facility, have similar structures. In order to obtain pertinent information, face-to-face interviews will be conducted with committee members, including the Chief Executive Officer, Chief Medical Officer, Head of Nursing, Head of Administration, Quality Assurance Officers, Risk Coordinator, and Heads of Units or Departments.

The committee's main responsibilities include putting the RM policy and strategy into practice at the institutional level, adhering to the risk appetite and tolerance limits established by the provincial RM committee, and making sure that RM processes are implemented correctly using an authorised risk assessment methodology. The committee is also in charge of monitoring and reporting risks within the facility or institution, as well as developing and putting into practice mitigation solutions.

2.10.2 Enterprise risk management framework

The Committee of Sponsoring Organisations of the Treadway Commission (COSO) Enterprise Risk Management (ERM) framework has been adopted by the Free State Department of Health (Department of Health) for their risk management programme. The following components are included in this framework.

2.10.2.1 Internal environment

The Free State Department of Health's internal environment comprises multiple elements, such as moral principles, the proficiency and growth of its personnel, the management style, and the delegation of power and accountability. The department's attitude to risk management and dedication to resolving unfavourable incidents that could impede the accomplishment of strategic goals are modelled by its risk management policy (RM policy). It also emphasises how committed the department is to following all applicable laws and regulations.

The department's willingness to take risks is influenced by the specific timeframe within which objectives must be achieved, the available resources, and budgetary constraints. The department aligns its risks with its five-year strategic goals and assumes that associated risks are inherent. The department has categorised its risks into organisational, compliance, and resource risks.

Risk tolerance is the amount of risk that a person or organisation is willing to take on. A high-risk tolerance indicates a willingness to take greater chances, while a low-risk tolerance suggests a more conservative approach. The department's management sets the organisation's risk tolerance in line with its strategic goals and performance indicators. The Free State Department of Health's risk tolerance, as depicted in Figure 2.6, is benchmarked against national and provincial performance targets. The level of risk increases as performance deviates further from the

set targets. Consequently, performance indicators are used as a yardstick to evaluate the efficacy of risk management in the organisation, adhering to the same standards used in this study.

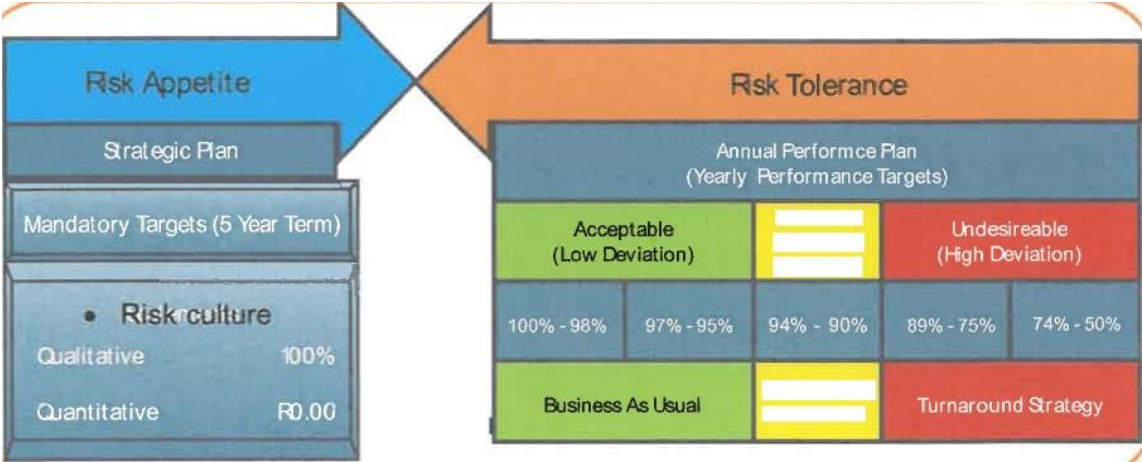


Figure 2.6: Risk tolerance (adapted from Department of Health 2020)

2.10.2.2 Objective setting

The department's mission, vision, and organisational values must be in line with management's objectives for effective risk management. Additionally, these goals must to align with the department's risk tolerance and appetite. These objectives are usually established during the budgeting and strategic planning process, which starts at the beginning of a five-year strategic plan and is evaluated every year.

2.10.2.3 Risk identification

Acquiring knowledge of the explicit and implicit institutional goals of the department is the first step towards risk identification. What could prevent the agency from accomplishing its goals is a risk. Identification, analysis, and documentation of the department's risks are the goals of a risk identification exercise. A document referred to as a "risk register" contains this information. A source of information for reporting significant risks to the department and pertinent stakeholders, the risk register also helps management focus on the most important tasks.

The process of risk identification involves several key considerations:

- Strategic risks

These risks arise from the department's strategic decisions and their impact on the department's ability to fulfil its purpose.

- Industry-specific risks

These risks are inherent to the industry in which the department operates. As a healthcare organisation, the department may face legal liability if patient harm occurs due to negligence.

- Operational risks

These risks pertain to the department's internal operations, encompassing personnel, systems, procedures, and events.

The following queries can help direct discussion and cognitive processes in order to help identify major risks:

- What are the primary objectives of our institution?
- Who are our stakeholders, and how can they pose risks to us, and how can we pose risks to them?
- How do we create value for our stakeholders?
- What are the critical success factors for our institution?
- What are the critical processes within our institution?
- What potential sources of risk and change could impact the above?

Once the initial risk identification step is complete, management can proceed with evaluating the interconnections among identified risks.

2.10.2.4 Risk assessment

This step's objective is to establish a consensus on the relative significance of each identified risk, which will guide further assessment activities.

Risk assessment is the process of analysing hazards according to their probability of happening and its possible consequences (Risk = Impact x Likelihood). In this step:

- each risk's impact is ascertained;
- each risk's probability of happening is evaluated; and
- A composite risk score is determined.

By considering both impact and likelihood, risks can be prioritised based on their combined risk rating, as highlighted in Table 2.6. While impact gauges the anticipated size of an event's effects on a certain area, problem, or function, likelihood evaluates the likelihood that an event will occur.

Table 2.6: Risk methodology

Rating	Assessment	Definition
1	None	Negative outcome/ opportunity likely to have negligible impact on ability to meet objectives
2	Minor	Negative outcome/ opportunity likely to have relatively low impact on ability to meet objectives
3	Moderate	Negative outcome/ opportunity likely to have relatively moderate impact on ability to meet objectives
4	Major	Negative outcome/ opportunity likely to have relatively substantial impact on ability to meet objectives
5	Extreme	Negative outcome/ opportunity likely to have critical importance on ability to meet objectives

Likelihood

- Determine the likelihood or expected frequency of each risk occurring (How often will it occur?)

Rating	Assessment	Definition
1	Rare	Risk is conceivable but only likely to occur in extreme circumstances
2	Unlikely	Risk occurs infrequently and is unlikely to occur in the next 12 months
3	Possible	Risk has an above average chance of occurring at least once in the next 12 months
4	Likely	Risk could easily occur, and is likely to occur at least once in the next 6 months
5	Certainly	Risk is already occurring, or is likely to occur more than once in the next 3 months

Source: Adapted from Department of Health (2020)

In the process of risk assessment, the Department of Health in the Free State Province employs two categories of hazards: inherent and residual risks. Residual risk is the risk that persists after control mechanisms have been put in place, whereas inherent risks are those that exist in their inherent state (without any controls in place).

2.10.2.5 Control activities

In the control activities step, the focus is on identifying and evaluating the controls in place for prioritised risks, as well as assessing the effectiveness of these control measures. The researcher also examines the existing risk management processes and determines if additional cost-effective control measures are necessary.

Control activities encompass the following:

Verifications, authorisations, and approvals: Employees are granted limited authority by management to perform specific tasks and complete designated transactions. The transactions or actions that need approval from a supervisor before they may be completed are specified by management. Whether it is given manually or electronically, supervisor approval attests to the fact that the activity or transaction conforms to all applicable laws and regulations.

Reviews of performance: Management compares current performance data with budgets, predictions, previous periods, or other benchmarks to assess the degree to which goals and objectives are being met. Unexpected outcomes or performance that deviates from expectations are noted and looked into.

Division of labour: Tasks are assigned to multiple individuals to minimise the risk of errors or improper conduct. Separate responsibilities are designated for handling assets (custody), authorising transactions, and recording

transactions (accounting). The control rating in Table 2.7 indicates that effective control measures lead to reduced residual risks, while ineffective control measures result in higher risks that can adversely impact organisational performance.

Table 2.7: Control rating

Control rating

Control Rating	Guide (qualitative)	Risk Control Effectiveness (quantitative)	Probability of the risk occurring	Likelihood
Effective	Nearly all controls (including all “critical controls”) are well designed & work as intended i.e. nothing more to be done except review & monitor the existing controls	≥90% - 100%	≤ 5%	1 = Rare
Mostly effective	Most controls are working as intended i.e. most things in place & working, but still some work to be done	≥70% - 89%	6% - 14%	2 = Unlikely
Ineffective	Only some controls are working as intended	≥50% - 69%	15% - 49%	3 = Possible
Basic	Limited controls. Still needs a lot of work i.e. just getting started	≥30% - 49%	50% - 89%	4 = Likely
None	Virtually no reliable controls in place or not working as intended	≥0% - 29%	≥ 90%	5 = Certainly

Source: Adapted from Department of Health (2020)

2.10.2.6 Risk response

The risk response step involves developing a risk response strategy to address the identified risks. As part of its overall risk management approach, the organisation will take the measures listed in this strategy, which include escalating, transferring, accepting, and mitigating the risks. The strategy specifies the responsible person, allocated resources, budget, timeline for implementation, actions to be taken, and the risks they address. Additionally, it includes information about the mechanism and timing of status reviews for the response plan.

To assist in determining the appropriate response strategy, a heat map is used in the Department of Health as an effective visualisation tool for ERM. The heat map, sometimes referred to as a risk matrix or heat chart, shows the impact of a risk on the vertical axis (Y) and the likelihood of the risk on the horizontal axis (X). By analysing the position of each risk on the heat map in Figure 2.7, the organisation can assess the level of risk tolerance, as per Table 2.8, and determine the most suitable course of action to mitigate potential negative effects.

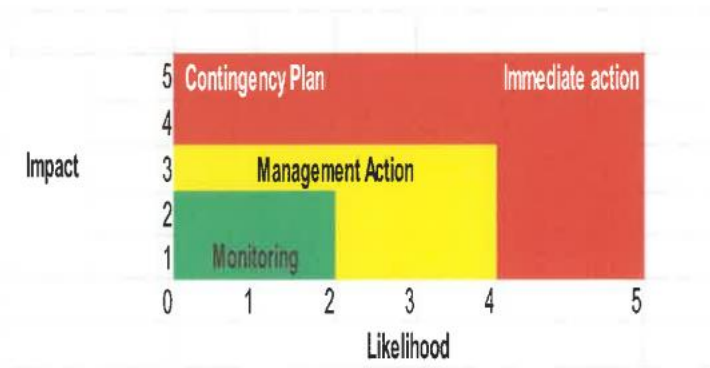


Figure 2.7: Heat map (adapted from Department of Health 2020)

Table 2.8: Tolerance levels

RISK LEVEL	IMPACT	LIKELIHOOD	ACTION AND LEVEL OF INVOLVEMENT REQUIRED	Deviation
Low Risk	1,2	1,2	Acceptable <ul style="list-style-type: none"> Monitor Manage by routine procedures within the program 	Low Deviation (Business as usual)
Medium Risk	3	3,4	Endurable <ul style="list-style-type: none"> Inform CEO/Senior Manager/ responsible manager FS Health Senior Management involvement/ attention is essential to manage risks – provide appropriate report 	Moderate Deviation (Management intervention required)
High Risk	4,5	5	Undesirable <ul style="list-style-type: none"> Inform CEO/Senior Management/ responsible committees Drastic measures required 	High Deviation (Turnaround strategy required)

Source: Adapted from Department of Health (2020)

2.10.2.7 Information and communication

The objective of this step is to generate appropriate reports on the outcomes of risk management activities, emphasising key areas that require attention. As per the Department of Health's risk management policy in the

Free State, institutional risk committees are recommended to submit their reports to the CRO of the department on the final day of each quarter. The risk information collected will be utilised to inform and update the departmental risk register, which undergoes an annual review, enabling the assessment and reporting of the effectiveness of control measures.

2.10.2.8 Monitoring and reviews

These actions comprise keeping an eye on issues and doing routine inspections to guarantee the smooth operation of the overall risk management system. Health facilities are obligated to regularly manage risks in order to verify that mitigation actions are functioning within the required timeframes, while also ensuring that the probability and impact of risks do not escalate. In the quarterly reviews, progress reports concerning the reduction of high and medium risks are presented during the meetings of the institution’s risk committee, thereby providing early warning to the departmental risk management committee about significant risk concerns and enabling the prompt implementation of mitigation actions.

Emerging risks can be defined as newly identified risks that pose an imminent threat to the institution. These risks need to be reported to the Risk Management Unit, after which they have to be added to the institution's own risk registry as well as the Department Risk registry.

Such risks must be reported to the Risk Management Unit and subsequently included in both the Department Risk Register and the institution’s own risk register.

These actions entail keeping an eye on issues by doing routine inspections to verify that the risk management system is operating as intended. Health care institutions must regularly monitor risks to make sure that mitigation measures are taking effect within the allotted time frames and to stop hazards from becoming more likely and more severe. During the quarterly reviews, progress reports on the reduction of high and medium risks are presented in the meetings of the institution’s risk committee, providing early warning to the departmental risk management committee regarding significant risk concerns and facilitating the swift implementation of mitigation actions.

2.11 Summary of key literature findings

Table 2.9: Summary of key findings

Objectives	Primary research Questions	Literature review in Chapter 2	Key findings to be used in the study
To evaluate the effectiveness of the risk management process utilised in formulating the COVID-19 risk management strategy at the XYZ PHC facility	How effective was the risk management process used to develop the COVID-19 risk management strategy at the XYZ PHC facility?	2.7 Measuring the effectiveness of enterprise risk management	<ul style="list-style-type: none"> The effectiveness of an organisation’s ERM is determined by assessing the presence and functionality of its eight components (COSO 2004:7). The pillars are objective setting, internal environment, event identification,

			<p>risk assessment, risk response, control activities information and communication and monitoring.</p> <ul style="list-style-type: none"> Measuring effectiveness in the public sector involves comparing the objectives that can be achieved with the actual objectives that are accomplished. For Department of Health 's strategic outcomes are the following: prolonging life expectancy, reducing maternal and child deaths, reducing TB and HIV incidents and strengthening healthcare interventions. XYZ PHC facility uses efficiency indicators to monitor its progress towards achieving these goals.
Secondary objectives	Secondary questions	Literature review in Chapter 2	Concepts, framework , criteria
To gain an understanding of enterprise risk management	What is enterprise risk management?	Section 2.4 to 2.5: Definition of ERM, benefits and limitations of ERM and ERM processes	Definition of Enterprise risk management as an integrated risk management approach in a facility.
To explore the criteria used to assess the effectiveness of enterprise risk management	What are the criteria used to assess the effectiveness of enterprise risk management?	Section 2.7: Critical success factors for effective ERM implementation	7 common critical success factors according to literature review will used in this study. They are the following factors: trust, training, culture, communication, organisational structure, information technology and commitment and support from Top management.
To evaluate the critical success factors for effective enterprise risk management procedures	What are the critical success factors for effective enterprise risk management procedures?	Chapter 2.6: Measuring the effectiveness of ERM and monitoring and reviews of Department of Health's ERM	Department of health use risk management benchmark to assess it risk tolerance. It is benchmarked against national and provincial performance targets. The level of risk increases as performance deviates further from the set targets

The main conclusions from the literature review that will serve as the foundation for the data collection are shown in Table 2.9. The key findings will be used as instruments in both qualitative and quantitative methods of exploratory sequential design.

2.12 Conclusion

Based on a thorough analysis of the literature, it is clear that ERM is essential to an organization's ability to achieve its strategic goals. CSFs show up as important factors influencing RM practices. Selecting CSFs that complement each organization's distinct features—size, scope, and strategic objectives, for example—is essential to ensuring the effective implementation of ERM. To support the successful application of ERM, all critical success factors found in the literature were taken into account in this study. In particular, the XYZ PHC facility used seven CSFs to assess the effects of implementing COVID-19 RM. The research approach employed in this study is covered in the upcoming chapter.

Chapter 3: Research Methodology

3.1 Introduction

A survey of pertinent literature for this subject was done in the previous chapter. The research approach employed in the study is the main topic of this chapter. Within the discipline of risk management, this study attempts to evaluate the efficacy of the procedures used by the XYZ PHC facility to manage risks related to COVID-19 during the pandemic. The study will take place in the healthcare sector, more precisely at the Department of Health's XYZ PHC facility.

An outline of the research design that will be applied in this study is given in this chapter. Creswell (2008:5) defines research designs as all of the plans and processes that direct the research process, from general hypotheses to specific techniques for gathering and analysing data. This study will use a hybrid methodology that combines qualitative and quantitative methodologies in accordance with Creswell's framework. The research philosophy, which clarifies the study's underlying presumptions, follows from the selected research design (Creswell 2008). It also describes the research methodologies, such as sampling plans, methods for gathering data, approaches for analysing data, and pertinent ethical issues.

3.2 Research design

Using an exploratory sequential design and a mixed-method research methodology, this study combines deductive and inductive methodologies (Toyon 2021). Clark and Ivankova (2015) state that exploratory sequential design is helpful when a researcher wants to delve deeply into a phenomenon with a small group of participants while simultaneously wanting to apply these findings to a larger population. This makes the design perfect for the study,

since the goal is to examine the risk management strategies utilised to create a COVID-19 risk management, starting with the risk champions and working your way up to the facility's senior and intermediate managers. The following are important components of the exploratory sequence design:

3.2.1 Implementation

The order in which qualitative and quantitative data are collected and analysed, whether in a sequential or concurrent manner, is referred to as the implementation aspect (Creswell et al. 2003). Data is gathered in two stages over time in the exploratory sequential design. The goal of the study and the research questions, which look for contextual, field-based interpretations of the statistical results, will determine whether or not to follow the sequence of qualitative-quantitative data collection and analysis in this design (Creswell 1999). Risk champions' (participants') perspectives and insights into the research issue will be captured in this study's qualitative phase (interviews), which will be followed by a questionnaire based on qualitative findings and literature studies. As a result, these two types of data will be distinct yet linked at the same time.

3.2.2 Integration

When qualitative and quantitative methodologies are combined or integrated during a particular stage of the research process, it is referred to as integration (Creswell et al. 2003; Green, Caracelli & Graham 1989; Tashakkori & Teddlie 1998). By merging quantitative and qualitative outcomes, data integration makes it possible to comprehend the data in more detail. Data integration lessens the drawbacks of a single strategy and increases the usefulness of mixed methods research. The process of conducting research can be integrated at several phases, including the creation of goals and objectives, study design, methods, analysis, and conclusions. Since some participants will be included in both the first and second phases of the study, a quantitative questionnaire that is prepared based on the findings of the interviews will integrate the first and second phases of this investigation. Ultimately, while presenting and interpreting the study's findings, the researcher will combine the findings from the two stages.

3.2.3 Priority

Priority describes how much weight or focus is placed on the quantitative or qualitative method while gathering and analysing data (Creswell 2003). The researcher will give equal weight to both research approaches in this study.

3.2.4 Visual model

A visual model is a diagram that shows how the two approaches in a mixed method study are connected and integrated, as well as the order in which the data is collected, prioritised, and utilised. The graphical representation of the exploratory sequential processes that the researcher will employ in this study is shown in Figure 3.1 below. The figure shows the steps involved in doing the research, the different methods for gathering and analysing data, the connections between the qualitative and quantitative stages, and the stage at which the results from the two phases are integrated.

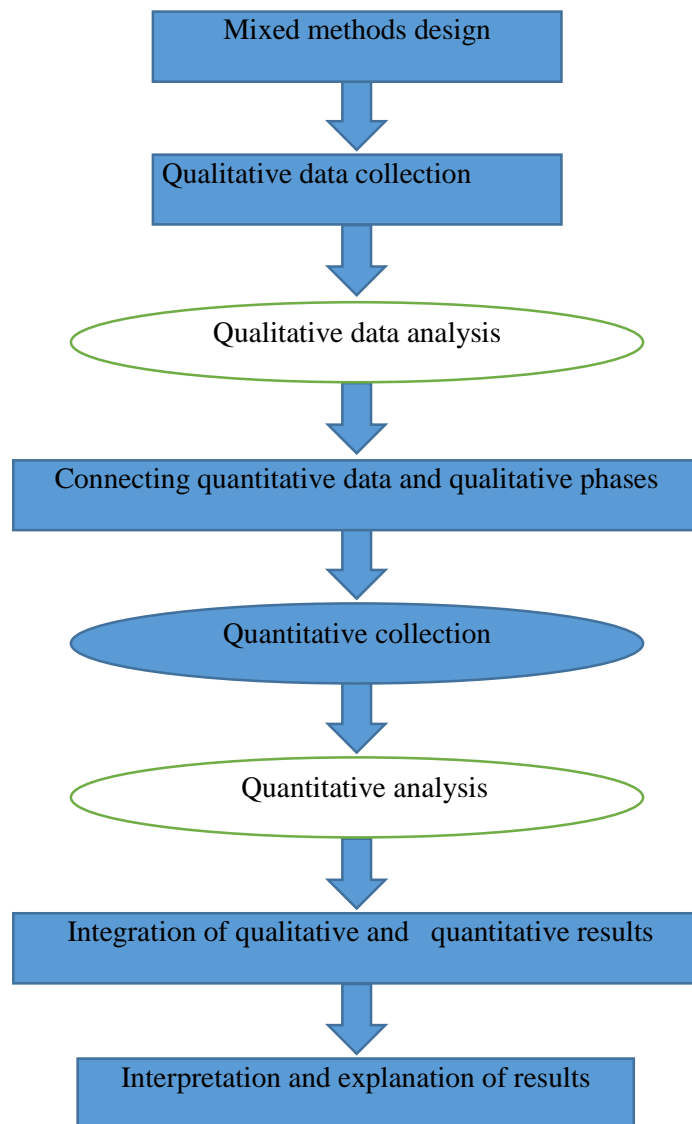


Figure 3.1: Exploratory Sequential Design (adapted from Creswell 2003:206-212)

3.2.5 Philosophy of the research

Pragmatism serves as paradigm for this study. The quantitative method offered a general assessment of ERM systems and processes and their impact on the outcomes of the XYZ PHC facility, while the qualitative portion of the study examined knowledge, insights, and experiences that were used to enhance ERM processes during the implementation of the COVID-19 risk management strategy. The research question in this study was addressed by making use of the advantages of both research approaches. According to Morgan (2014), pragmatism as a research philosophy allows for adaptability in the production of knowledge, recognising the existence of multiple realities.

Researchers generally agree that the mixed research approach's prevailing philosophical foundation is pragmatism (Dieronitou 2014, Hall 2013; Hathcoat & Meixner 2017; Yvonne Feilzer 2010). According to Johnson et al. (2007), pragmatism provides a sophisticated philosophy that includes the logic and epistemology needed to integrate qualitative and quantitative methodologies and approaches. Likewise, pragmatism is the ideology that permits the blending of paradigms, presumptions, methodologies, and techniques for gathering and analysing data, according to Creswell (2014).

As a research philosophy, pragmatism recognises the value of ideas if they facilitate action. Pragmatists acknowledge the diversity of worldviews and research perspectives, realising that there may be more than one reality and that no single viewpoint can fully capture the whole picture. Pragmatism allows for the integration of many research tactics and procedures, such as action research, quantitative, and qualitative methods, inside the same study. The ontological, epistemological, and axiological facets of research methodology are also included in pragmatism.

Pragmatism acknowledges, from an epistemological point of view, that reality is discovered by use of a range of investigative techniques and instruments that include both objective and subjective data. Whatever the underlying philosophy of the research, it should therefore be conceived and carried out to best address the research questions (Biddle & Schafft 2015; Creswell 2014). According to Creswell (2014), Hall (2013), and Shannon-Baker (2016), pragmatism is not predicated on presumptions about the nature of knowledge, but rather on the solution of real-world practical problems. A pragmatic researcher might choose to do mixed, quantitative, or qualitative research, based on what best meets their goals, according to Biddle and Schafft (2015).

3.2.6 Conceptual framework

The development of the conceptual framework for this study will be guided by the philosophical foundations of pragmatism and the mixed methods approach. A conceptual framework, according to Kumar and Rao (2015), is an analytical instrument that logically combines several conceptions and contexts to arrive at a procedure that can offer the most comprehensive explanation of the topic at hand. The internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring are the eight components of the ERM Integrated Framework that are viewed by the conceptual framework as independent variables whose implementation will increase ERM effectiveness, which is the dependent variable (figure 3.2).

Furthermore, based on their influence on ERM effectiveness, CSFs of ERM implementation also have a moderating effect on the relationship between ERM implementation and facility outcomes. Effective ERM will also positively influence facility outcomes or goals (financial and non-financial metrics) (figure 3.2).

Eight components of ERM implementation ensure that the process must be continuously reviewed and monitored with simple but effective communication to improve ERM effectiveness (figure 3.2).

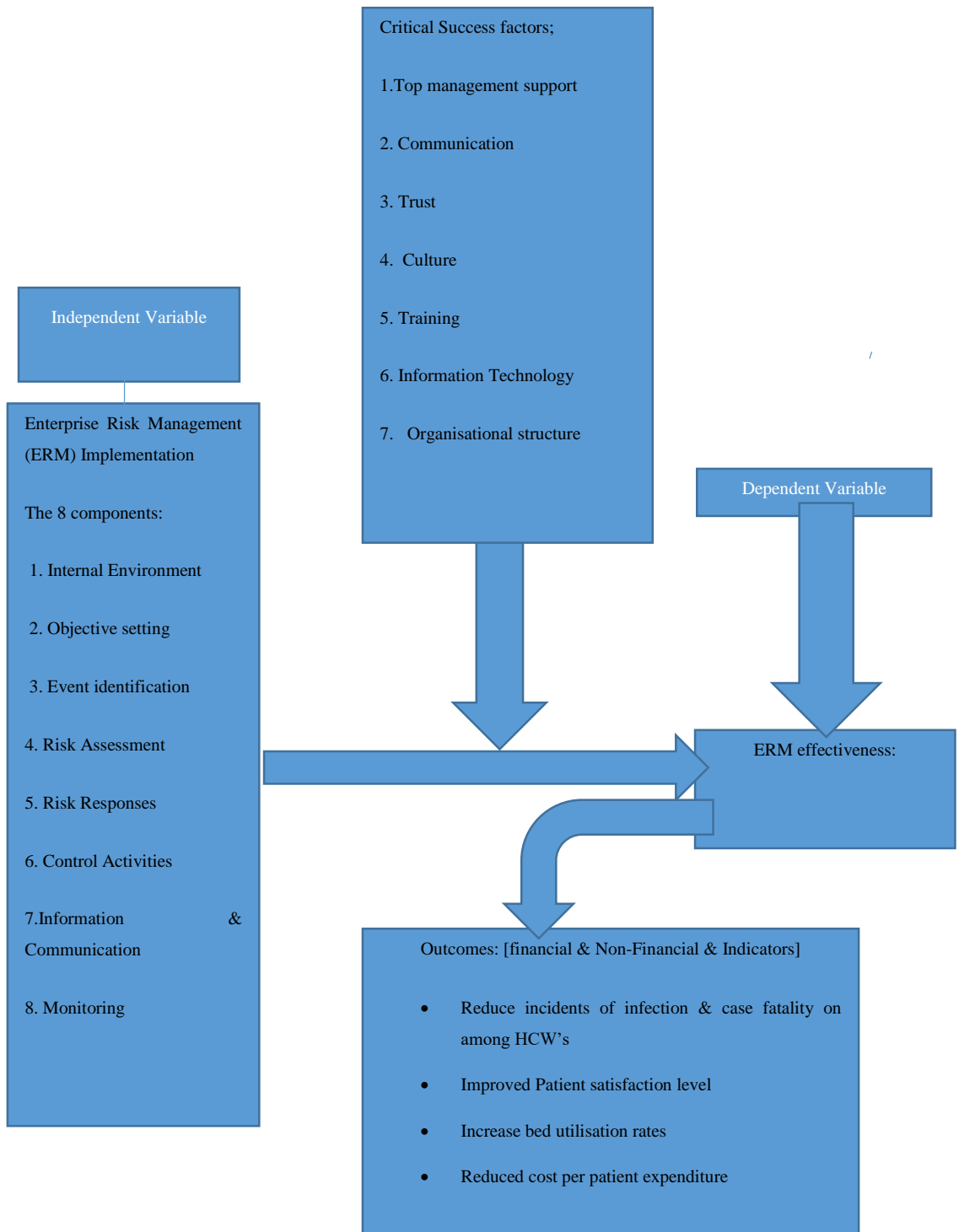


Figure 3.2: Conceptual Framework (Ping & Muthuveloo 2015:151)

3.3 Sampling strategy

This section discusses the sampling strategy in this study.

3.3.1 Sampling for the qualitative phase

The researcher employed **purposive sampling** to recruit participants for structured interviews. According to Bryman et al. (2019:186), this sampling technique guarantees that participants are carefully chosen based on their applicability to the goal of the research. The target audience consists of managers who participated in the enterprise risk management (ERM) process at the XYZ PHC facility during the COVID-19 pandemic as a member of an extended management team. A small number of individuals with particular qualities of interest that the researcher needs to address the study topic are chosen by purposeful sampling. According to the researcher's practical experience, the body of literature that is currently available, and the data from the study itself, a framework of variables that might affect a person's contributions must be developed (Marshall 1996:253). The XYZ PHC facility's risk champions, or individuals who contributed to the ERM procedures during the COVID-19 pandemic, are subjects of this study. The XYZ PHC facility has 28 risk champions, who are all appointed risk committee members responsible for ERM at the management level.

The researcher selected 20 participants based on the following criteria from the XYZ PHC facility's risk committee register and reports:

- The participant should be a risk owner in a specific unit or department at the XYZ PHC facility.
- The participant should be in charge of overseeing and reporting to the XYZ PHC facility's risk management committee the risks associated with their particular unit.
- The participant was expected to have attended most risk management meetings and training sessions at the XYZ PHC facility throughout the COVID-19 pandemic in order to actively participate in the risk management process.

The researcher got participants' contact information and details from the XYZ PHC facility risk registers especially attendance registers and appointment letters on terms of reference of the ERM committee members, which is available from the facility's Quality assurance officer as well as from the HR personnel and salary (Persal) report at the human resource department.

3.3.2 Data saturation

According to Mason's (2010) review of 560 PhD studies that used qualitative interviews as their main research methodology, sample sizes for qualitative research typically ranged from 15 to 50 participants, with grounded theory studies averaging 20 participants. Furthermore, Guest, Bunce, and Johnson (2006) discovered that after completing just 12 interviews, 88% of the codes generated during their analysis of data from 60 qualitative interviews were formed. Therefore, the researcher believed that theme saturation could be achieved in the qualitative interviews with 20 participants (Table 3.2) and if saturation is reached before the researcher gets to the 20th participant, then the researcher will stop the process of interviews.

However, if after interviewing 20 people saturation is not achieved, the researcher will follow Bernard's (2012) advice to interview participants who the researcher would not ordinarily consider in order to improve data saturation. Bernard (2012) issued a warning about the "shaman effect," which occurs when someone with in-depth knowledge of a subject unintentionally or purposely obscures the facts. As a result, the researcher will speak with the District Director of YZ District in this instance. She is in charge of managing and supervising district performance and is a senior manager in the Department of Health with extensive expertise in risk management and quality assurance.

3.3.3 Sampling for the quantitative phase of the study

The researcher's method for choosing a sample from the population was probability sampling, which is founded on probability theory (Bryman et al. 2019:40). There are four different types of probability sampling: multi-stage, stratified random, systematic, and basic random. The researcher used basic random sampling in this investigation, giving every member of the population an equal chance of being included.

Non-probability sampling is a sampling technique where the samples are collected in a process that does not give all the individuals in the population an equal chance of being selected (Bryman et al. 2019:40). This method is used for research that is exploratory or qualitative in nature. In this study, the researcher employs convenience sampling, because the research subjects were easily accessible to the researcher to choose by the virtue of the researcher working at XYZ PHC facility. The study's population of interest comprises 62 middle and senior management personnel who work at the XYZ PHC facility and the researcher aims to recruit all members of the population.

To obtain a representative sample from the population, the researcher selected a sample size using the Raosoft Sample Size Calculator. The recommended sample size is 54 out of the population of 62, based on a 50% response distribution, a 95% confidence level, and a 5% margin of error (Table 3.1). Data were collected from both clinical and non-clinical units within the XYZ PHC facility.

Frontline HCWs in the XYZ PHC facility and from local clinics, as well as quarantine units, are excluded from this study, as risk management is a management function. Top and middle managers who were not part of the XYZ PHC facility's management during the COVID-19 pandemic are also excluded from this research.

3.4 Data collection techniques

This section discusses the different stages that involved the data collection process in this study. Before the questionnaire was given to respondents, it was authorised by the researcher supervisor and examined by a statistician from the UFS Statistical Consultation Unit.

The first stage involved getting the UFS Business School's scientific review committee to approve the research proposal. Afterwards, the researcher sent the research proposal to the UFS Ethics Committee for ethical clearance.

As the XYZ PHC facility is managed by the Department of Health, FS, the research is based in the health sector. The next step was for the researcher to ask for permission and approval from the Department of Health Ethics Committee to conduct the study at the research site. After approval and ethical clearances were given by both committees, for permission to visit the research site and participants, another request was made to the District Director.

The next phase involved scheduling a meeting with the facility executive management where an introduction of the researcher and research was done at the research facility. Afterwards, a meeting with the facility's HR and quality assurance manager was arranged for the researcher to ask for and receive participants' contact details using the facility's HR personnel and salary system (Persal) at the facility. HR Persal has all staff information, including ranks, job titles, contact numbers, emails and salary levels.

The Quality Assurance (QA) manager of the facility has all facility's appointed committee documents, registers and reports, including staff's appointed letters to committees and attendance registers. Therefore, a QA manager is the ideal person to provide the researcher with detailed information regarding risk champions and other participants (top and middle managers).

Documental analysis of performance indicators and strategy document such as DOH's annual performance plans, five-year strategy document, YZ district health plan and XYZ PHC facility performance plan will be done to assess and analyse the impact of the COVID-19 risk management strategy on the XYZ PHC's performance in details. While the secondary research questions were answered by reviewing Department of health's Enterprise risk management policy and strategy as well as XYZ PHC facility ERM committee minutes and reports.

3.4.1 Qualitative aspects of the research

Naturalistic inquiries including non-numerical data are characteristics of qualitative research. Rather than attempting to explain and control variables, it aims to comprehend and investigate. It is interpretative and contextualised, emphasising patterns of development or the process of learning rather than the research's ultimate product or result (Nassaji 2020:427). Inductive data analysis that moves from specific observations to broad themes, the formulation of questions and procedures, data collection—usually done in the participants' natural environments—and the researcher's interpretation of the data are all steps in the research process (Creswell 2007).

A range of techniques can be utilised to collect qualitative data, such as focus groups, observations, field notes, diaries, and in-depth interviews (Ivankova & Stick 2002; Nassaji 2020:428). In the first stage of the exploratory

sequential design of this study, the method employed by the researcher was in-depth interviews. During an in-depth interview, key information is gleaned from the interviewee through organised or open-ended conversation. It is significant to notice that the phrase "in-depth" emphasises the extent of the relationship that develops during the purposeful conversation between the interviewer and the respondent (Talja 1999).

The use of in-depth interviews has benefits and drawbacks. It calls for thorough preparation and building a relationship with the interview subjects. The researcher employed a consistent set of interview questions for each participant and asked concise, straightforward, and focused questions in order to prevent bias and anchoring during the interview process. In order to provide the participants the best chance of providing an accurate response by allowing them to concentrate on one issue at a time, the researcher also gave each participant ample time to respond to the questions and divided more complex ideas into smaller questions.

This method allows respondents to divulge specific information by building trust (Lewis et al. 2009). The necessary information can be shared because of the confidence that has been built between the interviewer and the respondent. Researchers are able to evaluate and synthesise a vast number of data because in-depth interview data are frequently rich and thorough (Toyon 2021).

The XYZ PHC facility's ICAM room, which offered an appropriate setting with enough space and few distractions, was used for the interviews. The interviews took place during less busy periods to maximise participation and minimise interference with participants' work schedules. The duration of the interview period spanned a period of five working days, thereby allowing each enough time for the interview and the flexibility to reschedule if needed due to work demands. Scheduling the appointments with participants in advance helped to accommodate participants' busy work commitments and minimise inconvenience during working hours. It was based on the participants' availability and convenience. In cases where the participants were not able to attend due to work commitments, they were requested to propose an alternative day within the data collection period. This approach aimed to enhance participation rates in the research. Majority of interviews lasted an hour and the questionnaire (Appendix B) served as a guide during the interview process.

Each participant was given an informational brochure about the research study (Appendix D) to read and view before to the interviews. The information pamphlet describes the goals of the study, the methods used, and the ethical issues. Before beginning the study, the participants signed informed consent forms (Appendix E). Before the research process started, all of the participants' worries and inquiries about the study were answered.

During the face-to-face interviews, a tape recorder recorded the conversations, and the researcher also took detailed notes of the conversations. Each participant was given a pseudonym or unique identification number to safeguard their identity throughout the recording, note-taking, and reporting process to ensure anonymity

Table 3.1: Mixed methods research process – outline of Phase 1

Phase one	Primary research objective	Primary researcher question	Study design	Sample	Setting	Data collections	Ethics/ Rigours
Qualitative	To assess the impact of the COVID-19 risk management strategy on the XYZ PHC's performances	- What was the impact of the COVID-19 risk management strategy on the XYZ PHC's performances?	20 out of 28 participants of risk owners) Purposive sampling	20 out of 28 participants of risk owners) Purposive sampling	XYZ PHC facility, ICAM room	- Face-to-face interviews (interview questions) - (check Appendix B) - Focus group of 8-10 participants	Informed consent Anonymity Credibility Dependability Confirmability Transferability
	To propose ways of improving the XYZ PHC's enterprise risk management strategy to cope better with future risks like COVID-19	How can the XYZ PHC's enterprise risk management strategy be improved to cope better with future risks like COVID-19				-	

(Source: self-complied by author)

3.4.2 Quantitative aspects of the research

Questionnaires are research tools used to gather information from predefined participants to gain insight and knowledge about a specific topic of interest (Bryman et al. 2019:57). The quantitative research approach is known for producing reliable and replicable measures, which are important indicators of research validity (Bryman et al. 2019:57).

Techniques for quantitative data analysis are employed to look at quantifiable factors and get numerical results. Three types of quantitative research designs exist: prescriptive, predictive, and descriptive analysis. By obtaining data on the distribution of study variable frequencies or their correlations, the descriptive analysis creates a profile of the many types of individuals, occurrences, issues, and circumstances (Gabor 2010). A type of data called

predictive analytics is used to evaluate past data, identify patterns, track trends, and utilise that knowledge to forecast future trends and Prescriptive analysis is a kind of data analysis that makes conclusions or suggestions for the next course of action based on data, reasoning, and mathematics. By taking historical trends and pertinent variables into account, it assists organisations in improving their performance, strategy, or outcomes.

After the questionnaire was created, its comprehension was tested on a pilot group of about ten participants (Appendix A). Subsequently, in the second stage, every participant received an email including a questionnaire, and to guarantee a greater response rate, additional phone calls were made. A cover letter outlining the ethical considerations, the goal of the research, and an introduction to the study was attached to the email (Appendix D). The subjects pertaining to the research question were the main emphasis of the second page of the questionnaire.

3.4.3 Literature review

The secondary research questions pertaining to the study objectives are addressed in the literature review carried out in Chapter 2. Table 3.3 lists the research issues that were investigated in the literature review:

- What is enterprise risk management?
- What are the criteria used to assess the effectiveness of enterprise risk management?
- What are the critical success factors for effective enterprise risk management procedures in Primary healthcare?

Table 3.2 summary showing the link between the research questions, study objectives, and data collection instruments used in the investigation.

Table 3.2: Study objectives aligned to data collection methods

Objectives	Questions	Data type	
Primary objective	Primary question	Documental analysis	Research methods
To evaluate the effectiveness of the risk management process utilised in formulating the COVID-19 risk management strategy at the XYZ PHC facility.	How effective was the risk management process used to develop the COVID-19 risk management strategy at the XYZ PHC facility?	Review of secondary sources to check the XYZ PHC's facility performance and presence of eight components of ERM and CSFs.	<p>Qualitative interviews: (Interview Questions) – Ask questions that will allow participants to give their opinion regarding the effectiveness of risk management process used to develop COVID-19 risk management strategy using Critical Success Factors basis of the questions.</p> <p>Quantitative: Questionnaire based on the results of qualitative results and literature reviews</p>
Secondary objectives	Secondary questions		
<ul style="list-style-type: none"> To explore and define the concept and components of enterprise risk management 	What is enterprise risk management?	Literature review: Chapter 2	
<ul style="list-style-type: none"> To identify and examine the criteria commonly employed to assess the 	What criteria are used to assess the effectiveness of enterprise risk management?	Literature review: Chapter 2	

Objectives	Questions	Data type	
Primary objective	Primary question	Documental analysis	Research methods
effectiveness of enterprise risk management			
<ul style="list-style-type: none"> To investigate and determine the critical success factors that contribute to the effectiveness of enterprise risk management procedures 	What are the critical success factors for effective enterprise risk management procedures?	Literature review: Chapter 2	
<ul style="list-style-type: none"> To assess and analyse the impact of the COVID-19 risk management strategy on the XYZ PHC's performance 	What was the impact of the COVID-19 risk management strategy on the XYZ PHC's performance?	Quantitative: Questionnaire based on the results of qualitative results and literature reviews	Qualitative interviews: (Interview Questions) ask questions that participants to give their opinion on impact of COVID-19 pandemic in the facility
<ul style="list-style-type: none"> To develop recommendations and strategies to enhance the XYZ PHC's enterprise risk management approach in order to effectively handle future risks, particularly those similar to COVID-19 	How can the XYZ PHC's enterprise risk management strategy be improved to better cope with future risks like COVID-19?	Qualitative interviews: (Interview Questions) – Ask questions that allow participants to give their opinions on ways to identify mechanisms to improve enterprise risk management. Quantitative: questionnaire based on the results of qualitative results and literature reviews.	

(Source: self-complied by author)

3.5 Data analysis

The data analysis from both the qualitative as well as the quantitative approaches is discussed in this section

3.5.1 Qualitative analysis: Thematic analysis

Thematic analysis (TA) was used in the study's initial phase to analyse the data (Figure 3.3). The process of segmenting the data into manageable chunks, renaming and categorising them, and making inferences based on the themes found are all part of a thematic analysis (Clarke & Braun 2013:4). This method is renowned for its adaptability and capacity to produce thorough and in-depth outcomes (Clarke & Braun 2013; King 2004b). For researchers who might not have much expertise with qualitative methodologies, it is especially helpful. Thematic analysis, in the opinion of Clarke and Braun (2013) and King (2004b), makes it possible to thoroughly examine the perspectives of participants and makes it easier to produce a final report that is well-organized. Although Clarke and Braun (2013) introduced a six-phase approach to theme analysis, Creswell (2007) recognises that data collecting stages are frequently linked to one another.

The researcher used Clarke and Braun's (2013) theme analysis approach for this study. Figure 3.3 shows the various phases of the analysis.

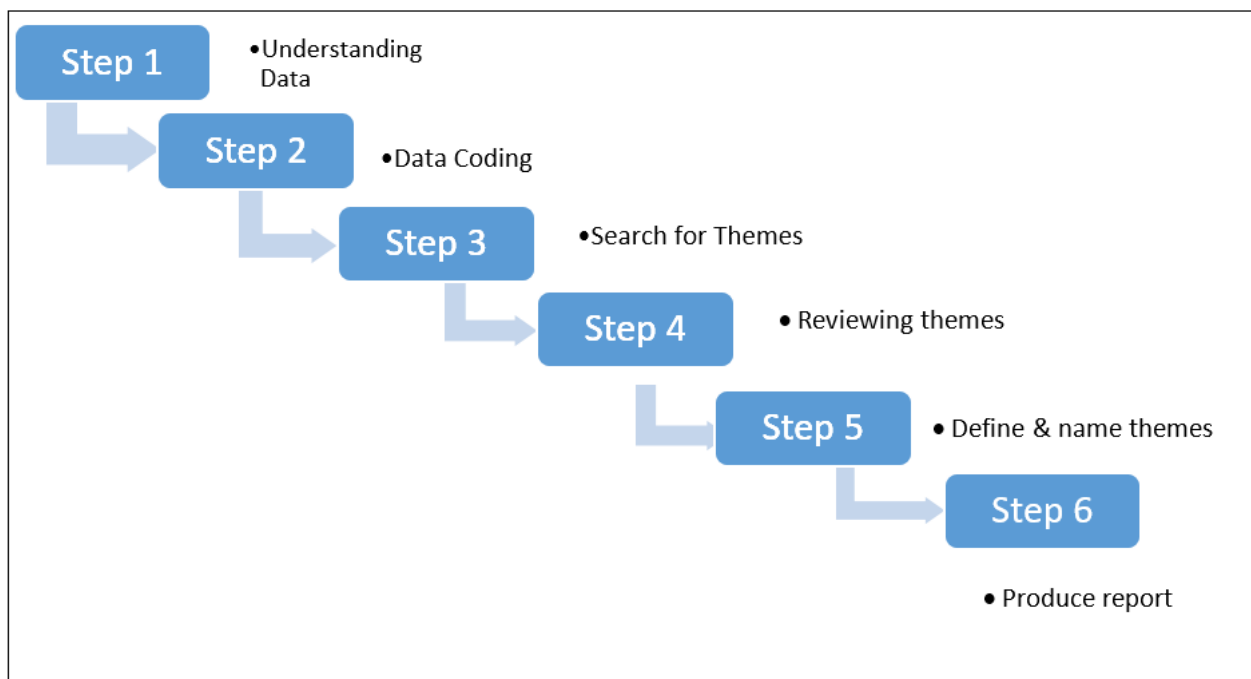


Figure 3.3: Thematic analysis (adapted from Clarke and Braun 2013:4)

Step 1: Understanding the data

It's advised by Clarke and Braun (2013:4) that you go over the whole set of data before starting to code. By doing this, the researcher can better shape patterns as they become acquainted with different elements of the

data. In-person interviews were used to interact with participants and gather data for the current study. The investigator acquainted himself with the interview material and perused the information in an attempt to discern significance and consistency.

Step 2: Data coding

Clarke and Braun (2013:5) state that this phase involves the initial formation of codes. Coding leads to breaking down data into different parts and examining their similarities and differences (Vaismoradi et al.,2016:3).

King (2004b) states that during coding, important sections of text are identified and marked accordingly. Clarke and Braun (2013:4) further reiterate that too many levels of coding can be counterproductive. As a result, the data should be divided into few and manageable codes.

Step 3: Searching for themes

The next step was to look for themes. The coded information was categorised into themes (Clarke & Braun, 2013:5). The information was categorised based on commonalities and discrepancies, as stated by Clarke and Braun (2013) and Vaismoradi et al.,(2016). A theme is the primary outcome of data analysis, as stated by Vaismoradi et al. (2016:3). Moreover, themes might originate deductively from theory and earlier study or inductively from raw facts, according to DeSantis (2000:351).

Step 4: Reviewing themes

Re-examining and fine-tuning the data items was the fourth process. Coherence within the themes was assessed, and the validity of individual themes was also evaluated for meaning (King 2004b). Adjustments were made to clarify any shortcomings in coding or to divide themes into subthemes, if necessary (Clarke & Braun 2013).

Step 5: Defining and naming themes

The data were further being analysed to understand the story that each theme conveyed. Certain data points may fall under more than one theme, with possible overlap (Pope, Ziebland & Mays 2006). Themes were carefully reviewed and refined before proceeding to the next phase (Clarke & Braun 2013).

Step 6: Producing the report

Writing the report and doing the data analysis are the last steps. Report aims to provide a concise, analytical, and engaging account of the data within the identified themes (Thorne, Stephens & Truant 2016). King (2004:256) suggests that direct quotes from participants are crucial in the final report. Short quotes and longer excerpts are included to illustrate specific points and capture the participants' perspectives effectively.

3.5.2 Quantitative analysis

Quantitative data analysis techniques are employed to examine measurable features and generate quantitative findings. In this study, the researcher utilised the widely used R version 4. R is a statistical software package to

process the data in a quantitative manner. Since the data was on a Likert scale, Likert bars graphs were used to show percentages.

3.6 Approach to validity and reliability

This section covers the study's reliability and validity.

3.6.1 Qualitative

Credibility, dependability, confirmability, transferability, and reflexivity are the five principles and tactics that have been found in prior studies to help maintain rigour in qualitative research (Korstjens & Moser 2018; Noble & Smith 2015). These five guidelines and tactics, which are outlined in Table 3.4, were applied and followed in this investigation.

Table 3.3: Five principles & strategies of qualitative research

Principles	Strategies	Measures
Credibility	Prolonged engagement	To keep the interaction between the researcher and the research in balance. To re-listen to audio recordings and assess the interview's substance on your own.
	Member checking	To member-check during the interview and ask for clarification and to confirm the meaning of the examples to be provided.
Dependability	Audit trail	The study protocol has been given, and all phases and procedures are detailed.
Confirmability		Acknowledgement of the researcher's presumptions and ideas. Acknowledgment of the study's methodology flaws and possible consequences.
Transferability		Suitable parameters and sample size. A concise explanation of the gathering and processing of data. A thorough explanation of the traits, opinions, and experiences of each individual using quotes. Examining results and conclusions.

Principles	Strategies	Measures
		Suggestion for additional study.
Reliability for content analysis	Stability	To ensure accuracy, the results were verified many times for coding categories. Analyses and confirmations of similar findings in several blended codes were conducted.
	Reproducibility	The researcher conducted independent data analysis and produced codes and findings from the research data.
Reflexivity	Critical self-reflection	Preserve equilibrium in the interaction between the researcher and the research. In order to assess the interview content on her own, the researcher listened to the audio recordings again.

(Source: Adapted from Othman, Steen & Fleet 2020:78)

Shenton (2004:64) asserts that one of the main issues positivist researchers address is internal validity, which focuses on making sure the study measures or tests what is intended. Credibility is the term used to describe the similar idea of internal validity in qualitative research. Additionally, highlighting the significance of credibility in determining trustworthiness are Lincoln and Guba (1985). In order to establish the study's legitimacy, the researcher used member checks and extended involvement.

Merriam (1998:207) defines external validity as the degree to which the conclusions of one study can be transferred to different circumstances, much like transferability. The challenge is in proving that the study's findings are applicable to a larger group of people. Qualitative research findings cannot be shown to be generalizable to other settings and populations since they are peculiar to certain surroundings and individuals. On the other hand, this study offers a thorough explanation of contextual elements that could affect the research's external validity.

According to Elo et al. (2014:4), dependability is the consistency of the research procedures used throughout a period of time. This includes the process for gathering data, the research methodology, how findings are interpreted, and how outcomes are reported. The study's procedures are described in full to address dependability, allowing other researchers to duplicate the work even if the outcomes may be different. Readers can evaluate the adherence to appropriate research techniques and have a clear grasp of the methodologies and their efficacy with such comprehensive material. It contains an explanation of the research concept, how it was carried out, information on how the data was collected operationally, and a thoughtful analysis of the study that includes a review of the investigation method.

According to Korstjens and Moser (2018), confirmability is the degree to which the findings may be verified by other parties. Confirmability in this study is achieved through an audit trail that records the steps involved in data collection, analysis, and interpretation. The researcher took meticulous notes for record keeping and used a diary to record the interpretation of data. Keeping transcripts of the research data allowed for the verification of emerging themes. Reflexivity refers to analysing one's own opinions, behaviours, and beliefs during the study process and how these might have impacted the findings (Shenton 2004).

3.6.2 Quantitative

When discussing assessment, validity pertains to how well an instrument assesses the targeted constructs. Three types of validity are taken into consideration in quantitative research design: concept, criteria, and content validity. A pilot research was carried out to guarantee the questionnaire's validity and reliability. Five risk owners were asked to provide input, and this helped determine the content and face validity of the results. The questionnaire was modified as needed to ensure clarity and readability based on the input that was received.

The degree to which assessment scales accurately report the study questions is known as content validity, and the degree to which they may correctly predict or estimate results—both predictive and concurrent validity—is known as criterion validity. Contrarily, construct validity is concerned with a research tool's capacity to produce evidence grounded in theory. In quantitative techniques, internal and external validity are extra factors to take into account in order to determine the causal linkages between independent and dependent variables and to extrapolate results beyond particular research settings. The study's ecological validity—that is, its suitability for people's everyday lives or natural environments—may be jeopardised, it is crucial to remember, if participants are forced to fill out a structured questionnaire.

Conversely, a measurement's dependability, regularity, consistency, and clarity are referred to as its reliability. Dependability can be classified into three categories: stability, equivalency, and internal/consistency reliability. While equivalency reliability focuses on getting consistent results from the same tool when employed by different researchers with various samples, internal/consistency reliability relates to the homogeneity of items within a measurement tool. Examining the consistency of findings from repeated evaluations of the same subjects or items is known as stability.

Ten risk owners participated in a pilot test twice in order to collect assessment and comments regarding the questionnaire survey's reliability. This stage is essential for assessing the following factors:

- The questions' appropriateness, comprehensibility, interpretation, and clarity in gauging the success of CSFs in ERM at the XYZ PHC facility.
- The suitability of the answer options.
- The questionnaire's internal coherence.
- How quickly responders finish filling out the surveys

3.7. Ethical considerations

This section discusses ethical issues that are relevant to this investigation.

3.7.1 Permission

Permission refers to the consent and authorisation obtained to conduct a study or research within a specific area or facility. The District Director of YZ Health Services, granted the researcher permission to carry out the study at the XYZ PHC facility (Appendix C). After receiving this authorization, the researcher submitted an application for additional authority to carry out the study at the Department of Health Free State site to the Ethics Committee of the Department of Health. The Head of Department, Mr. G. Mahlatsi, gave his final consent for the study to be carried out at the XYZ PHC facility (Appendix F).

3.7.2 Informed consent

In compliance with legal requirements, informed consent refers to the process of getting participants' approval or permission based on adequate information, especially when there are several treatment options or choices that require disclosing or withholding information about third parties (Department of Health 2016). The investigator created an informed consent form (Appendix E) and secured signed consent from the subjects before enrolling them in the study. All pertinent information is given to participants, and they are fully informed of their rights surrounding the study.

3.7.3 Voluntary participation

The freedom of participants to choose whether or not to join in the study is guaranteed by voluntary participation, which is free from any kind of coercion, pressure, or manipulation. The informed consent form features a section that emphasises voluntary participation, letting participants know that they are not required to participate in the study and that they can leave at any moment without incurring any fees (Appendix E).

3.7.4 Confidentiality and anonymity

Anonymity ensures that participants cannot be identified by name or other means within the study. No identifying information was collected from participants during the research. While the researcher is aware of the participants' identities, steps were taken to ensure that their identities remain private outside of the study. Each participant was assigned a unique identifier to maintain confidentiality.

Strict data management and security measures were enforced to guarantee confidentiality. Every day, the researcher's password-protected laptop was used to capture data from interviews and questionnaires using an Excel spreadsheet. Once the trial was over, the data were examined. The resources are strictly confidential and only the researcher has access to them (Appendix G).

3.7.5 No harm principle

Harm refers to physical injury, damage to a participant's well-being or self-esteem, stress, negative impact on career development, subsequent work, or subjecting individuals to unethical standards (Bryman et al. 2019). The participants' independent right to self-determination enabled them to decide for themselves whether or not to take part in the research project. It was emphasised that declining to participate in the study would have no effect on their current or future care, career development, or well-being. Informed consent also assured the participants that their non-involvement or withdrawal from the study would not disadvantage them at work and cause them any harm (Appendix E).

3.7.6 Ethical data management

Ethical data management involves the collection, storage, and responsible sharing of information gathered during the research process (Bryman et al. 2019). Data management practices in this study adhered to the requirements of the Protection of Personal Information (POPI) Act No. 4 of 2013 in South Africa (POPI 2013:2). POPI Act safeguards individual rights, particularly the right to access and protect personal information. Personally identifiable information of the participants was stored separately from the research data, either through identification documents or unique identifiers. Information security measures, such as password protection for electronic data and secure storage for physical data, were enforced to ensure data confidentiality (Appendix G).

3.7.7 Privacy and non-disclosure

According to Westin (1968), privacy is the right of an individual to decide how, when, and how much of their personal information is disseminated. Security measures for privacy deal with who can access personal data and how it can be accessed. The informed consent procedure recognised and safeguarded the participants' right to privacy, including the ability to decline to answer any inquiry that invades it, whether it be verbally or in writing (Appendix E).

3.7.8 Conflict of interest

A conflict of interest (COI) arises when a person's assessment of a primary interest appears to be unnecessarily influenced by a secondary interest, also known as prejudice (Thompson 1993). Benefits could be perceived, actual, or potential, and they could include both monetary and non-monetary gains. When doing and reporting the research, the researcher's impartiality or professional judgement may be compromised due to conflicts of interest (COI).

COI due to financial gains include a source of funding for the research, organisation and individual that might gain from the research, and acceptance of consulting or salary from individual or organisation that may benefit from the research. In this study, the researcher is currently employed by Department of Health, FS at the XYZ PHC facility, where he receives his salary monthly. Additionally, the Department of Health, FS, also funds the researcher's MBA tuition at the UFS.

Personal or professional relationships, political involvement, litigation involvement, and even philosophical or religious convictions have emerged as significant non-financial interests that may give rise to conflict of interest

(Resnik 2023). The researcher has a personal and professional stake in the study's outcomes because he works as a clinical manager at the XYZ PHC facility and is in charge of making sure that the facility meets its clinical goals.

Resnik (2023) asserts that disclosure is a crucial first step in addressing COI since it encourages accountability, honesty, and transparency in research. Therefore, in this study, the researcher has disclosed all COI information regarding his financial (current job and work title) and non-financial gains on the information leaflets.

3.7.9 Risk-benefit ratio

This study is taken through analysis of the risk-benefit ratio. The advantages of the research should, at the very least, exceed the risks or potential disadvantages to the subjects. This does not imply that simply because there may be advantages to the research, volunteers should incur needless risks or harm.

Knowledge that is applicable to more people than just the particular study participants is known as generalizable knowledge, and this is one of research's possible benefits. As this information can shield future patients from potentially hazardous and/or ineffective interventions in the future, the data demonstrating that an intervention was effective—or ineffectual, that it is inferior to the current standard of care—would likewise qualify as a benefit of study.

Risk assessment, on the other hand, concentrates on the additional hazards that study participants faced, which are frequently lower than the overall amount of dangers to which participants are exposed. There are risks related to the body, mind, society, and finances. In this study, the danger of psychological stress related to being interviewed about a subject that could be sensitive for some participants due to the loss of a colleague or viral infection was detected by the researcher. Throughout the interviews, the researcher made sure every participant was at ease and composed. In the event that the participants felt uncomfortable with the questions, the researcher halted the interview, giving them the opportunity to reschedule if further advancement was not feasible.

3.7.10. Research Bias

A systemic mistake in a study's administration, design, or analysis is known as research bias (Simundic, 2013). It can happen at any stage of the research process, including gathering, analysing, interpreting, and publishing data (Simundic,2013). Both qualitative and quantitative studies are susceptible to study bias (Simundic, 2013). It arises from any departure from reality, leading to erroneous inferences and distorted outcomes. When a systematic inquiry is conducted in an intentionally or inadvertently biased manner, the results of the study are subsequently skewed.

According to Simundic (2013), selection bias is the term used to describe a systematic error or distortion that occurs during the process of choosing study participants or samples, leading to a biased or non-representative sample. In this study, the likelihood of the researcher selecting non – non-representative is high because both purposeful and convenience sampling are used in the research method. Because the sample was selected for convenience rather than equal probability, the population will never be selected in a way that is statistically balance thus it will result in bias sampling. Other bias might the way the researcher chose his participants, preferring some

participants over others due factors such as bad or uncooperative attitude of participants. The researcher reduced bias by implementing the following measures:

- Selected the participants based on the eligibility criteria set on the research protocol.
- Tried to recruit all 62 respondents for the quantitative arm of the research and utilise a Raosoft Sample Size Calculator sample to figure out the right sample size.
- Included research questions in both qualitative and quantitative research methods.

3.8 Summary of of the research process

Table 3.4 Summary of mixed methods process to be used in the research.

Phase one	Literature review:						
	Documental analysis of performance indicators and strategy documents such as annual performance plans, five year strategy document, YZ district health plan and XYZ PHC facility performance plan. Department of health’s Enterprise risk management policy and strategy were also reviewed as well as XYZ PHC facility ERM committee minutes and reports.						
Phase Two	Qualitative data collection						
	Research objectives	researcher questions	Study design	Sample	Setting	Data collections	Ethics/ Rigours
	To evaluate the effectiveness of the risk management process utilised in formulating the COVID-19 risk management strategy at the XYZ PHC facility.	How effective was the risk management process used to develop the COVID-19 risk management strategy at the XYZ PHC facility?	- Exploratory Sequential Design,	-20 out of 28 participants of risk owners) -Purposive sampling	-XYZ PHC facility, ICAM room	Face-to-face interviews- (check Appendix B)	Informed consent Anonymity Credibility Dependability Confirmability Transferability

	To explore and define the concept and components of enterprise risk management	What is enterprise risk management?					
	To identify and examine the criteria commonly employed to assess the effectiveness of enterprise risk management	What criteria are used to assess the effectiveness of enterprise risk management?					
	To investigate and determine the critical success factors that contribute to the effectiveness of enterprise risk management procedures	What are the critical success factors for effective enterprise risk management procedures?					
	To assess and analyse the impact of the COVID-19 risk management strategy on the XYZ PHC's performance	- What was the impact of the COVID-19 risk management strategy on the XYZ PHC's performances					
	To develop recommendations and strategies to enhance the XYZ PHC's enterprise risk management approach in order	How can the XYZ PHC's enterprise risk management strategy be improved to cope better					

	to effectively handle future	with future risks like COVID-19					
Qualitative findings and analysis							
Connecting qualitative and Quantitative data							
Phase three	Quantitative data collection						
	Research objectives	researcher questions	Study design	Sample	Setting	Data collections	Criteria of quantitative research
	as above	Questionnaire based on the results of qualitative results and literature reviews	Exploratory Sequential Design,	-The recommended sample size is 54 out of the population of 62. -Convenience sample	XYZ PHC facility , Trompsburg Town , Free State Province	Questionnaire	Validity Reliability
Quantitative findings and analysis							
Integration of both data							
Interpretation and explanation of results							
Conclusion and recommendations							

(Source: self-complied by author)

The main conclusions from this chapter as shown in table 3.4, indicate the way this research unfolded from the literature review to the conclusion and recommendations

3.9 Conclusion

The approach utilised to collect data and information from HCWs involved in the creation and execution of the ERM process at the XYZ (PHC) facility during the COVID-19 pandemic was described in this chapter. In order to understand the viewpoints of healthcare workers and investigate how the ERM process affects organisational goals and units, the researcher used an MMR methodology. HCWs who actively contributed to the creation and

execution of a COVID-19 ERM plan at the facility were chosen through purposeful sampling. This method of sampling made sure that those who were willing to participate and pertinent to the study were included.

Chapter 4: Qualitative research results

4.1 Introduction

This study explored the effectiveness of risk management progress used to develop a COVID-19 Risk Management Strategy in the XYZ PHC facility in a rural town in the Free State Province. The aim was to assess its effectiveness and also determine critical success factors that helped the facility to achieve its goals. Main questions of the study are: (a) What is enterprise risk management? (b) What criteria are used to assess the effectiveness of enterprise risk management? (c) What are the critical success factors for effective enterprise risk management procedures? (d) What was the impact of the COVID-19 risk management strategy on the XYZ PHC's performance (e) How effective was the risk management process used to develop the COVID-19 risk management strategy at the XYZ PHC facility? (f) How can the XYZ PHC's Enterprise Risk Management Strategy be improved to better cope with future risks such as COVID-19?

Exploratory sequential design is useful in situations where researchers want to explore a phenomenon in depth with a few individuals but also want to expand these findings to a larger population. Thus this design is ideal for this study, as the researcher wants to explore risk management progress used to develop a COVID-19 risk management, with the risk champions first, before expanding it to a large population of middle and top managers within the facility. During the first wave of the pandemic, it seemed as if the facility was struggling to put enterprise risk management process in place due to various reasons but later during the third and fourth waves period, the facility 's performance seemed much better. The qualitative part of the research method will reveal RM process used during COVID 19 pandemic as well as provided insights of the challenges, successes and ways to

improve ERM processes during a crisis. The study also explored the criteria used to assess the effectiveness of enterprise risk management as there is no standard way of assessing the effectiveness of ERM in Public health Sector. Furthermore, the study identified critical success factors and mechanism to improve effectiveness Enterprise risk management processes.

Thus focus of this chapter will be the results of the qualitative method of this study. The approach adopted is to present findings from the interviewing process thematically without interpreting them. This is done in order to allow for the perception of research participants to be correctly articulated. It presents the findings using seven headings are adopted in line with the research instruments in order to address study objectives adequately. The heading are as follows:

1. Profile of research participants
2. Enterprise risk management processes.
3. Assessment criteria for effective enterprise risk management implementation
4. Critical success factors of effective enterprise risk management
5. Impact of the COVID-19 risk management strategy on performance
6. Evaluation of effectiveness of the risk management process used to develop the COVID-19 risk management strategy.
7. Identify mechanisms to improve enterprise risk management (Best practices)

4.2 Profile of research participants

This section examines the management experience of the research participants by examining at level of seniority, area of responsibility, duration of employment and role of participants in the ERM Committee. In total, all 28 risk champions were invited to participate, recruited, but only 21 indicated willingness for the interviews, with three unable to be interviewed due to work pressure on the scheduled times and dates. Therefore, 18 participants were interviewed.

4.2.1 Level of seniority

The research statement: Level of seniority of participant in the organisation

It is essential to comprehend the participants' seniority level in the facility's organogram to be able to get a better understanding who participates in ERM activities at the XYZ PHC facility. Seniority matters since enterprise risk management is a crucial management task carried out by the facility's managers. Participants in this study were part of the extended management, which includes top and middle management of the XYZ PHC facility. As Figure 4.1 illustrates, five participants (28%) were top managers and the remaining 13 (72%) were in middle management.

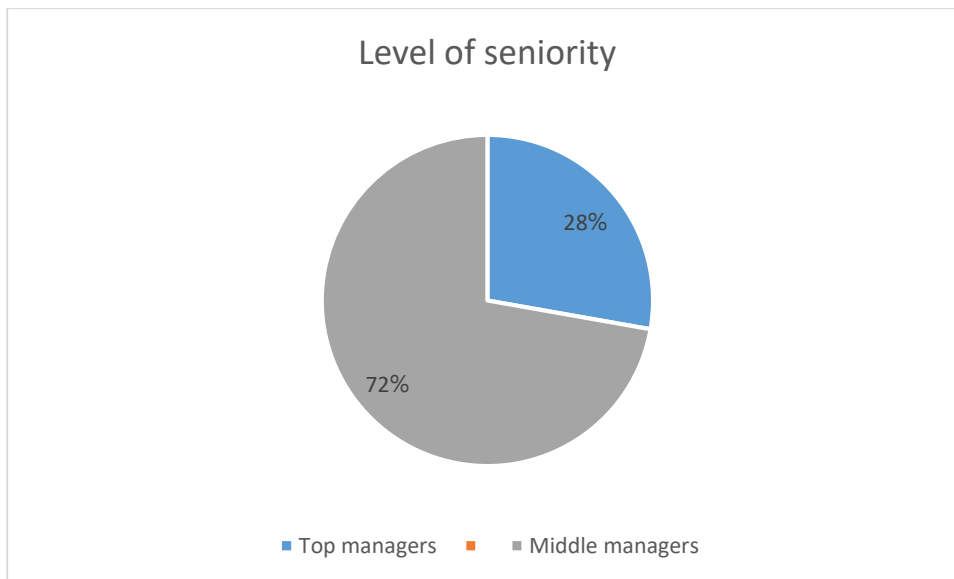


Figure 4.1: Level of seniority

“As head of nursing I’m part of the executive of the hospital, Risk management strategy helped us to achieve our goals, we focused on top strategic risks of our facility’.” (Participant AHO3)

Research participants have different ERM experiences with some especially top managers being highly experience while some in middle management are moderately experienced in ERM.

4.2.2 Area of responsibility

The research statement: area of responsibility

All 18 participants are in a position of authority either as supervisors and managers for their respective units. They have direct and indirect subordinates reporting to them. Each participant represented their unit in the XZY PHC facility enterprise risk management committee and are tasked to implement facility risk management policy and strategy, since the units where risks are located own and control the risks. Participants in this study are from both clinical and clinical units in XZY PHC facility. In terms of area of responsibility, as illustrated in Figure 4.2, 12 (67%) participants are responsible for clinical units, while six (33%) are responsible for clinical support units. The clinical units are departments that render service directly to the patient such as maternity and Outpatients units, while clinical support units are department in the facility that provides service to clinical units in order to ensure service is optimal such as laundry and administrations. The findings show that ERM committee of the facility is integrated and manages risks in a comprehensive way.

“I’m a PSI coordinator in the facility, I’m part of clinical team and ERM committee, that advised top management of how to handle COVID-19 infection in the XYZ PHC facility.” (Participant AHO1)

“COVID-19 pandemic made me realise the importance of my work regarding patient care, cleaning and cleanliness were central to COVID-19 management.” (Participant AHO4)

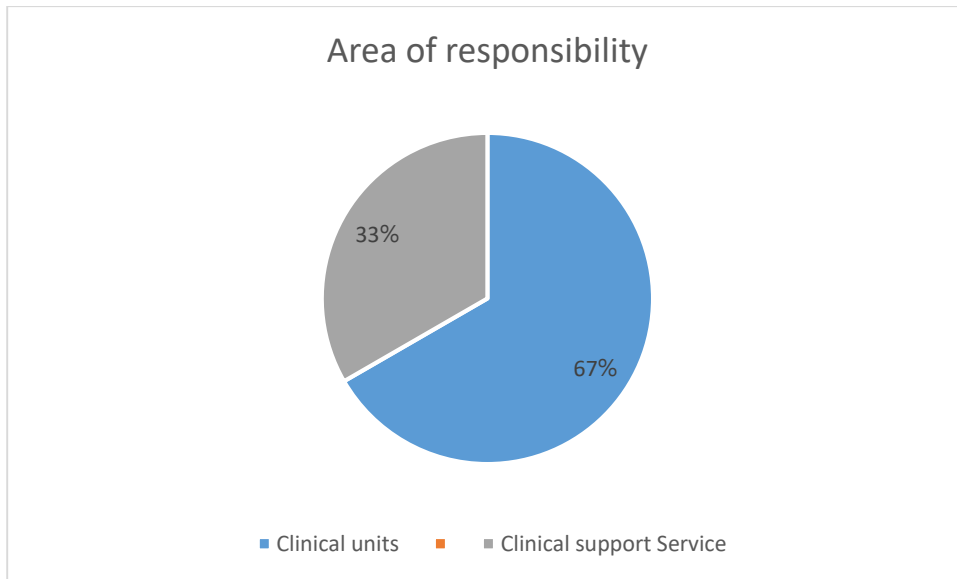


Figure 4.2: Area of responsibility

4.2.3 Duration of employment

The research statement: Duration of employment

Work experience contributes to participants' better understanding of the work and management procedures including understanding of systems and protocols within a facility. Experienced workers are more likely to notice minor changes in the work environment that their less experience colleague's due to familiarity to work setup or environment. Twelve participants (67%) had been employed for more than five years and 17% (three) participants had three years' work experience, even though the data does not indicate where they got their experiences from (Figure 4.3).

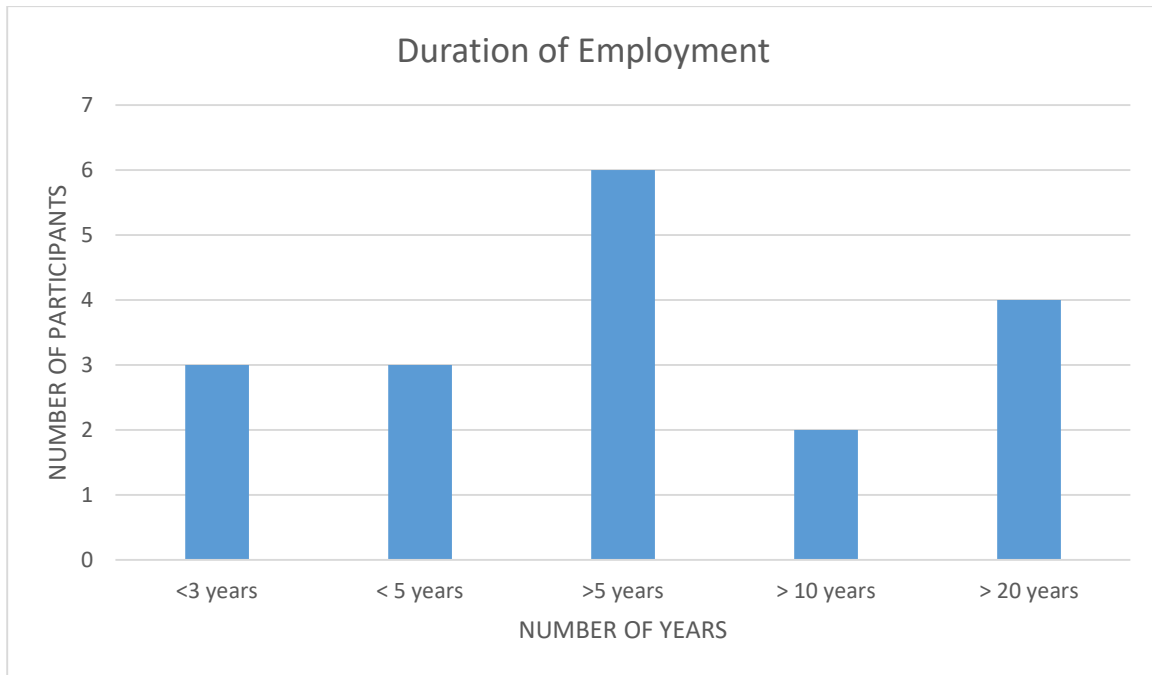


Figure 4.3: Duration of employment

“I previously worked as an HR manager for private company for 12 years but I was retrenched. I struggled to find work after that, and that is when I started to look for jobs in public sector, here I was lucky to get in job even though it’s in the rural area of the country.” (Participant AH11)

“I arrived in XYZ PHC facility 7 years ago searching for greener pastures, I had resigned from private sector. It gave me a new lease of life regarding my work. I m a pharmaceutical manager in the facility, my patients, here appreciates me more. My work matters.” (Participant AH07)

4.2.4 Role of participants in the Enterprise Risk Management Committee

The research statement: Role of participant in the ERM committee

All 18 participants of this research confirmed that they are appointed and are active members of the ERM committee in the XYZ PHC facility. According to terms of reference of the committee, different members are appointed to play specific roles in order to implement ERM activities in the facility. All participants reported that they understand their role within the committee as to ensure that risk management approach within the XYZ PHC facility is consistent and effectively applied against identified risks. Different roles in committee includes chairperson, chief risk owner, secretary, and representatives of different units that included clinical care, quality assurance, environmental health, nursing care, rehabilitation and support, Pharmaceutical, health and safety, infection control and cleanliness.

“Since I started in acting in management position until now that when I’m in charge of nursing, I have always represented my nurses in risk management, other people find in difficult but I enjoyed it. I’m currently the deputy chairperson of the committee.” (Participant AH03)

“The CEO appointed me as the secretary of the risk management committee, since I’m also secretary of quality assurance committee as well as, he thought their core functions are interrelated.” (Participant AH09)

4.3 Enterprise risk management

This section's objective is to evaluate the participants' comprehension of the ERM.

4.3.1 Understanding of enterprise risk management

The research question: What is your understanding of enterprise risk management at the XYZ PHC facility?

As anticipated, the majority of participants (16) said that ERM is about managing risks in an integration way rather than in silo or individually basis. One participant reported:

“It is an integrated approach with multidisciplinary team and effort to identify and mitigate risks in the facility, in order to achieve facility goals.” (Participant AHO7)

Another two participants reiterated the same sentiments shared by Participant AH07:

“COVID-19 showed us we need each other, the risks were so interrelated and overlapping that it forced us to work as team, I mean for example lack of donning and doffing area (infrastructure risks) (contributed to high infection incidents at the beginning.” (Participant AHO4)

“Identification and assessment and management of risk in a systemic way in the facility with contribution from all departments, leading to better communication and team work, facilitating wellbeing of patients and personnel, as well as to ensure that facility achieves its goals.” (Participant AHO11)

The statements above indicate that participants shared same understanding regarding ERM in the XYZ PHC facility.

4.4 Enterprise risk management ‘s processes .

This section aims to comprehend participant reflections on the ERMs used at the facility to formulate the COVID-19's RM.

4.4.1 Alignment of COVID-19's risk management with the facility's strategic objectives

The research question: How was the COVID-19 risk management aligned with the organisational strategic objectives of the XYZ PHC facility?

Twelve participants reported that risks are reported on the facility's risk register every quarter, and new or emerging risks were assessed and evaluated against the departmental and facility's strategic objectives during ERM meetings (Figure 4.4). Four participants indicated that COVID-19 risks were integrated into the facility register and became part of the facility risk management plan and, therefore, linked directly to the facility's goals and objectives.

“COVID-19 pandemic became strategic and high risk because it impacted on all three risks categories of facility, organisational, resources and compliance risks but most importantly its affected our staff and patients, so our core business was risk, we needed effective mitigation plan that will work.” (Participant AH 013)

“We looked at departmental objectives and goals and develop risks from them, we viewed COVID-19 risks as emerging risks in our risk registers, until it impacted negatively on our operations on daily basis.” (Participant AHO07)

One participant (AH06) indicated that COVID-19 risk management was aligned to national government goals, while two participants (AH017 and AH 09) reported that it was linked to provincial department of health objectives.

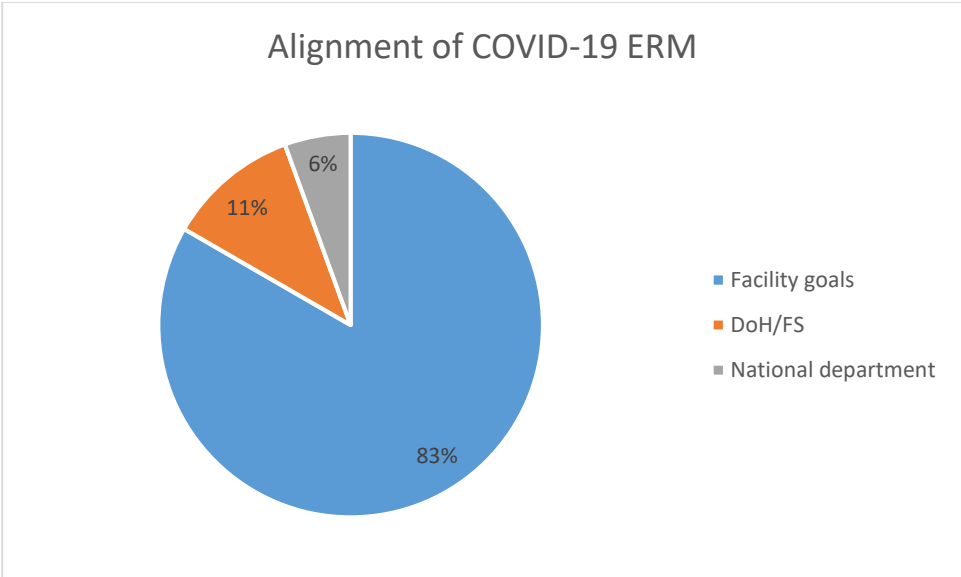


Figure 4.4: Alignment of COVID-19’s risk management with the objectives of the facility

4.4.2 Frequency of enterprise risk management meetings

The research question: How often does the risk management committee meet in the XYZ PHC facility to discuss risk issues?

Meetings are typically utilised as a forum for debating and making decisions about problems pertaining to the workplace at the facility. In accordance with the Department of Health's ERM Policy, quarterly ERM meetings are conducted in all Free State facilities to assess the efficacy of the facilities' risk management policies, plans, systems, and procedures and to offer suggestions for enhancement. All research participants indicated that Enterprise risk committee meeting used to be held on weekly basis during COVID-19 crisis and are now being held once a month at the XYZ PHC facility and quarterly at the district level.

“Weekly meeting during COVID-19 crisis now are scheduled on monthly basis at the facility and quarterly at district level, but it depends on the needs.” (Participant AHO1)

“We meet on monthly basis but during COVID-19 crisis it was weekly, I think quarterly at the district level.”
 (Participant AHO12)

4.4.3 Main stakeholders that were involved in ERM activities.

The research question: Who were the main stakeholders that were involved in ERM in the XYZ PHC facility during the COVID-19 pandemic?

In order to successfully complete a project or activity that involves a variety of stakeholders and helps them identify their areas of interest and collaborate to develop a shared vision or strategy, stakeholder management is essential (Bourne 2009). Therefore, COVID-19 risk management plan needed a buy in from stakeholders to gain credibility in order for it to succeed. Research participants indicated that a diverse range of stakeholders were involve in developing and managing COVID-19 infection in the XYZ PHC facility. The WHO and municipality were reported as the main stakeholders by all participants, while local health teams and UFS were also reported by majority (77%) of participants (Figure 4.5). Local health teams involved staff from EHP, community, municipality, clinic, police and mortuaries which help to track and trace patients in the catchment area.

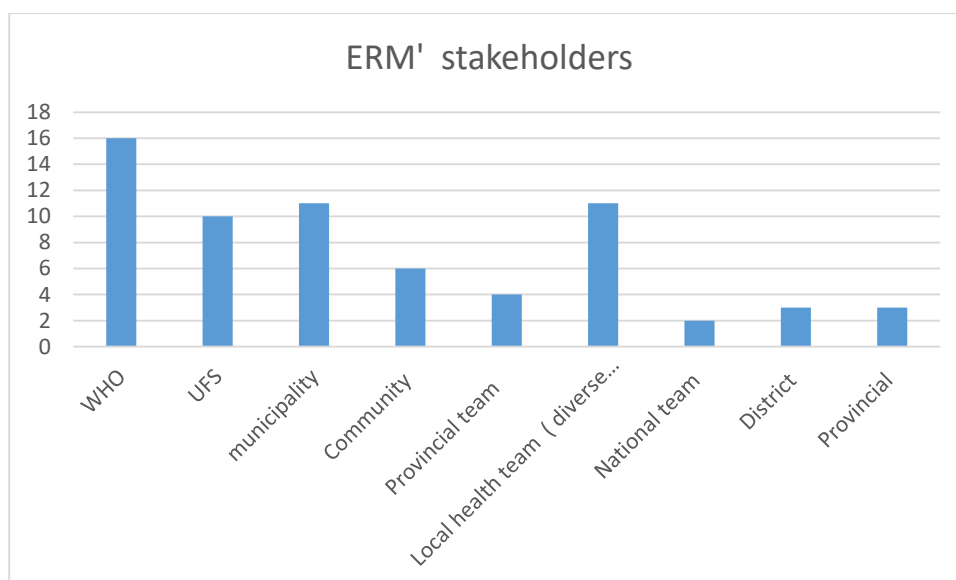


Figure 4.5: Stakeholders

“We work with provincial team, district COVID-19 committee, facility management, UFS, IPC, EHP, Municipality. UFS and WHO provided us with help from the beginning of the pandemic, otherwise it was the blind leading the blind.” (Participant AHO15)

“Provincial command team (COVID-19) helped to increase our motivation, resilience and team work. Our facility had no choice but to succeed we didn't want to disappoint them. We did better than normally due to greater collaboration with different stakeholders especially WHO, University. EHP, Municipality, they help, shame.” (Participant AHO8).

4.4.4 Communication methods

The research question: What communication methods were used to manage COVID-19 infection in the XYZ PHC facility?

The hybrid meeting combines a remote meeting conducted using conference call technology with a conventional in-person, face-to-face meeting (Hameed et al., 2021). COVID-19 pandemic made environment conducive for hybrid meeting especially during hard lock-down restrictions. Remote – working policies also contributed to use of hybrid meeting as means to communicate and monitor employee’s productivity at home. All research participants confirmed increased use of technology as means of communication during the COVID-19 pandemic. They reported that WhatsApp platforms were mostly used for informal communication as result the facility experienced an increased numbers of WhatsApp groups that were created as means of communication platform among staff. While virtual platforms on ZOOM or Team’s platform were also reported as one of the commonly used communication methods for training, meeting and debriefing sessions. Figure 4.6 shows communication used by as reported by participants during COVID-19 pandemic.

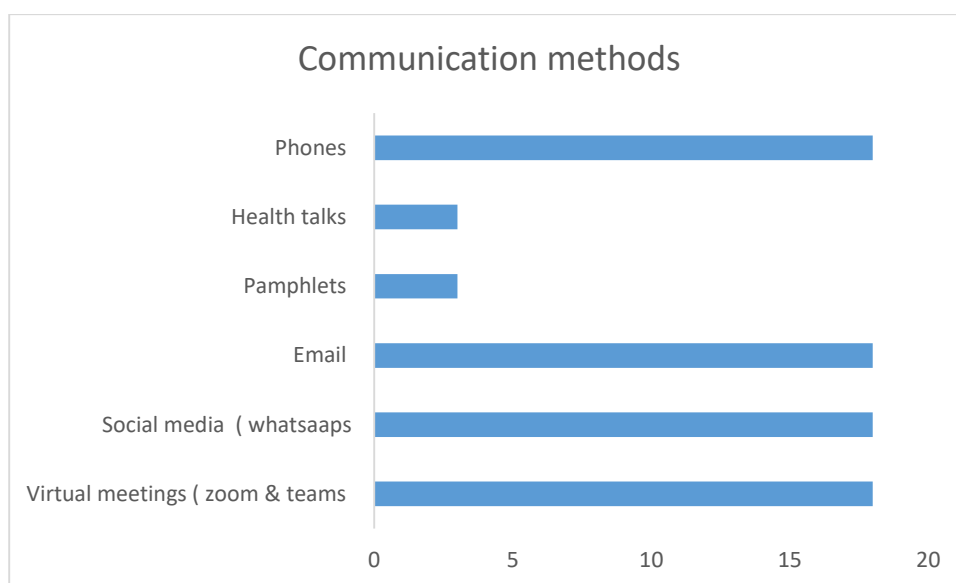


Figure 4.6: Communication methods

“WhatsApp was the most used communication methods, we did meeting, teaching, tracking of patients and reports on that platform, while virtual meetings were conducted among managers.” (Participant AH13)

4.4.5 Risk assessment

The research question: What risk identification, assessment, and tolerance setting were carried out at the departmental and operational level during the COVID-19 pandemic?

The process of identifying, analysing, and evaluating a risk in its entirety is called risk assessment. As part of occupational health and safety procedures, medical surveillance of staff members and facility risks assessments are included in continuous risk identification. In order to put into practice effective and efficient risk mitigation techniques as soon as possible, risk assessment assisted in determining the facility's risk appetite and tolerance levels. The majority of research participants reported that risk assessment that including medical surveillance for staff were conducted frequently during COVID-19 crisis in order to reduce staff anxiety and ensure maximum protection against infection of the virus in the facility. One participant reported:

“The facility was divided into three main areas red, yellow and green. The red areas were for high risk patients it was our isolation ward for confirmed COVID-19 patients ... while yellow areas were for patient presented them before screening (entry points of the facility). And green area, it was for low risk patients or non- clinical area such as administration block.” (Participant AH01)

Another participant reiterated the same sentiments shared by Participant AH01:

“Screening was done at all entries without fail until fatigue and complacent set in during the four wave, patients were then referred appropriately according to assessment and level of evaluation from to risk assessment, some patients were sent to quarantine site, while other were sent to different level of care according to diagnosis, risk factors, prognosis, resources and referral routes and expertise.” (Participant AH06)

“We had separate entries for confirmed COVID-19 patient and isolation wards staff in the facility, they were given different PPE and no one was allowed in the ward unless you were a patient and staff.” (Participant AH05)

“Risk register is the standard tool used to report new and emerging risks in the Department of Health, thus some participants reported using it to identify risks during COVID-19 pandemic.”

“We looked at departmental objectives and goals and develop risks from them, we viewed COVID-19 risks as emerging risks in our risk registers, until it impacted negatively on our operations on daily basis.” (Participant AHO07)

4.4.6 Reviewing process

The research question: How was the process of reviewing COVID-19 risk management done in the XYZ PHC facility?

Reviewing is a formal assessment of something with the intention of instituting change if necessary (Otieno 2000). As per the Risk Management Policy of FS Department of Health, it is recommended to undertake an annually evaluation or reassessment of the risks to ensure optimal mitigation. The majority of the research participants reported that risk management plan was reviewed on weekly basis at the facility or provincial level during COVID-19 pandemic by either provincial and district command teams. Weekly meetings by provincial COVID-19 provincial committee provided guidance on policies, guidelines, SOP as well as advise on clinical and management issues based on epidemiological reports, while district COVID-19 command team localise the plans for effective

implementation while looking at the available resources within the district. Figure 4.7 shows sources of data as reported by the participants that was used in the weekly meetings with provincial or district command committees.

“We used guidelines that were applicable to the facility (us), we reviewed and use them. We looked at our own situation (data, trends, experience, resources, skills, etc.) on the floor on daily basis to make necessary changes, sometimes weekly provincial COVID-19 meeting took too long make decision, so we use our allocated public health Medicine to maximum effect, we abuse her a lot, which helped.” (Participant AH13)

“Management by walking assisted us greatly, we have finger on the pulse, which increased our awareness and responsiveness, every Friday morning, we had clinical review meetings which analysed research papers and also helped with developing protocols and SOP to change our routine.” (Participant AH018)

Facility based COVID-19 command team also met on a weekly basis to prepare for district and provincial meeting, they reviewed the COVID-19 based the different information or reports as shown in figure 4.7. Mostly the research participants reported that information was from situational analysis on the floor and advice from the expert on the difficult cases. Reviewing data from the floor provided the facility with information regarding the effectiveness of the measures put in place especially the first wave when the institution was still setting up measures and intervention, while the reviews provided by the experts helped in the situation where there was no protocol or there was no consensus among the decision makers regarding an issue. Standard protocol and guidelines were followed and used to guide all stakeholders in order to provide structure and discipline but because the guidelines changed so frequently the provincial and district COVID-19 command meeting were used the assess the effectiveness of the intervention by comparing the facility measures with other facilities in the province. Facility based COVID-19 command team reviewed available research papers from similar setting to enhance and review clinical and risk management practice in the facility.

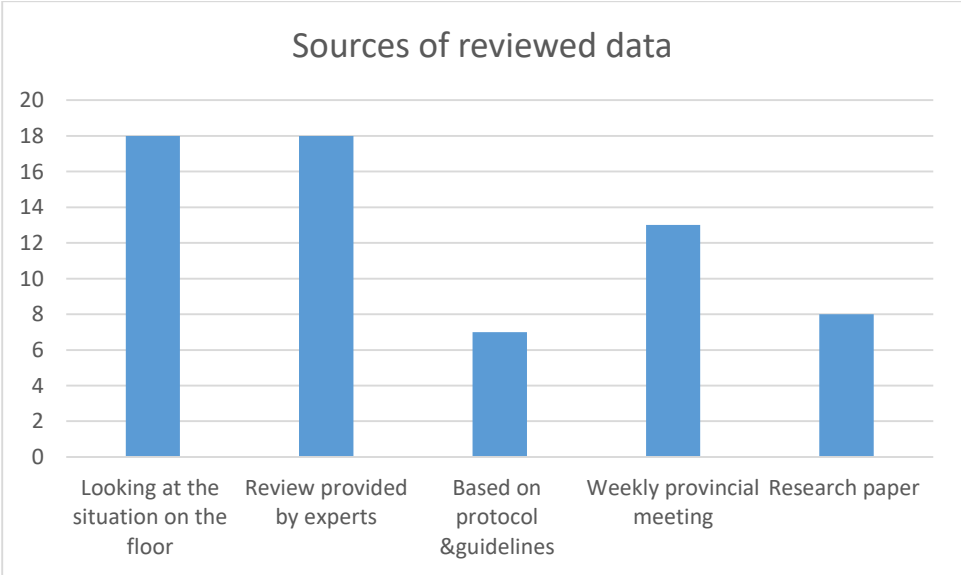


Figure 4.7: Sources of reviewed data

4.5.2 Monitoring

The research question: How is the effectiveness of the current risk management policies, guidelines, and practices monitored for further improvement plans?

Monitoring is the process of gathering and evaluating data to track how well organisational goals and objectives are being met (Otieno 2000). By using this method, companies may determine what is and is not working and make well-informed decisions about how to enhance their initiatives and programmes. Most participants were involved in monitoring risk activities in the units on daily basis and reporting the result on the weekly basis to the facility management and district COVID-19 committees. Figure 4.8 reflects reported monitoring activities that participants were involved with, during the COVID-19 pandemic.

“Quarterly meetings and monitoring, QIP’s are making it more effective in addressing or mitigating risks.”
(Participant AH01)

The XYZ PHC facility was subjected to several forms of monitoring, as depicted in Figure 4.8. The majority of research participants said that meetings were utilised for reviews, while a smaller number of participants reported that risk monitoring instruments and data analysis were employed for data review. However, post the COVID-19 pandemic, most participants indicated that they are monitoring their risk management plan quarterly using quality improvement plans.

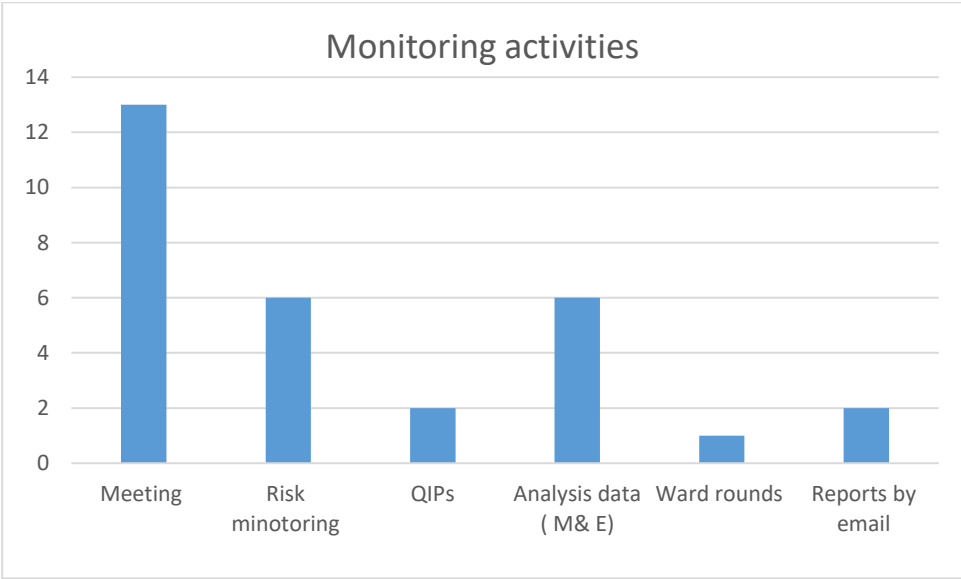


Figure 4.8: Monitoring activities

4.4.7 Bottlenecks

The research question: Which processes limited the impact of ERM during the COVID-19 pandemic?

Bottlenecks are setbacks that delay a process. All research participants reported that lack of SOP, PPE and vaccines delayed our response to management of COVID-19 especially at the beginning of the pandemic (Figure 4.9). Some participants reported stigma and fear of death as one of the greatest psychological obstacles that led to delayed staff and stakeholders buy-in in patient management.

One participant reported a fear of death and anxiety among staff increased conflict and mental health illness within the facility, but clinical psychologist and social worker helped with debriefing (Participant AHO4).

“COVID-19 is an unthinkable concept, its showed the importance of planning, preparedness and anticipation.”
 (Participant AH17)

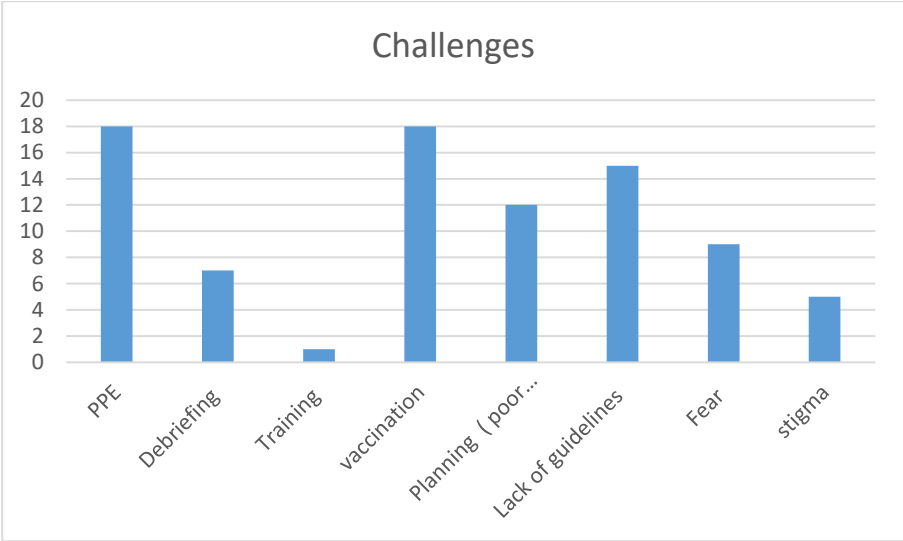


Figure 4:9: Challenges during the COVID-19 pandemic

4.4.8 Criteria were used to align identified risks with the organisation’s objectives and goals

The research question: What criteria were used to align identified risks with the organisation’s objectives and goals?

Criteria are standards that can serve as the foundation for a choice or judgement. Different criteria are used by institutions to evaluate the efficacy of risk management initiatives within their walls. The majority of participants stated that corporate risk definitions are provided by FS Department of Health's risk management policy, which aids in the classification of discovered risks in accordance with the department's chosen risk classification.

44,4 % of the participants also indicated that each risk is aligned to departmental goals in the risk register, which are allocated a target and a benchmark that gets monitored on a quarterly basis.

Four participants (22,2%) report that risk is classified as low, medium, high and as well as financial and strategic risks.

“This facility, financial, audit and political risks are treated a high risk while clinical which are core to the business of the facility are treated as mediums risks. Financial decisions take priority over clinical decisions.”
(Participant AH07)

4.5 Critical success factors of effective ERM implementation

This section discusses the overall views shared by participants about CSFs of ERM in the facility. CSFs are specific action that organisation must implement that enables it to reach its strategic objectives. Successful execution of critical success factors creates meaningful value for the organisation.

The research question: The research question: What are the critical success factors for effective enterprise risk management procedures in the XYZ PHC facility?

4.5.1 Stakeholder engagement

According to Bourne (2009), stakeholder management involves fostering positive relationships with those who have the greatest influence over your work. It involves intentionally identifying stakeholders and analysing their needs and expectations in relation to organisation’s objectives and goals. During COVID-19 pandemic, stakeholders were internal and external partners who were involved in managing and advising on COVID-19 infection management. Most of participants reported that collaborating with different stakeholders during the crisis reduced amount of patient’s complaints and helped the facility to gain external resources without paying for them due to good or improved inter – sectoral collaborations.

“Daily meetings, training, collaborations with other stakeholders and support from staff at provincial government or committees and programmes help to improve communication lines and enhanced positive culture, as well as improve Top management involvement regarding referral issues.” (Participant AH10)

Twelve participants (66,7%) indicated that top management involvement at the operation level improved staff commitment and readiness to tackle problems such as giving inputs regarding work place protocols, training and guidelines. But s six participants (33,3%) reported increased confusion on the floor due to different orders or instructions being issued by different leaders and managers.

“WHO and UFS helped with training, expert opinions, meeting, guidelines, SOP, and protocol, which lead to high staff commitment and morale and readiness to go and extra mile.” (Participant AHO2)

4.5.3 Training

The research question: What type of training was offered to HCW about COVID-19 infection risk at the XYZ PHC facility?

During the COVID-19 pandemic, participants reported having a good experience with the training programme. One crucial aspect of managing COVID-19 was thought to be infection and prevention control, or IPC, training.

IPC training included the promotion of isolation precaution, hand hygiene, disinfection and sterilisation and environmental infection control. Participants of this research reported that they have learned a lot about the COVID-19 management and employee wellness during those training. Figure 4.10 shows some of the trainings that were offered during the pandemic as reported by the participants.

Trainings empowered them to make informed choices pertaining to their work and as well as how to take proper care of themselves and other stakeholder. Participants explained the impact in the following terms:

“Valuable lessons that I learned is the importance of medical surveillance in protecting staff against work place incidents and infections. debriefing process, I went through showed me that we are all under stress, I might be positive or negative stress but we are need learn to manage stress better My health has improved since I started implementing all those lessons during debriefing sessions.” (Participant AH12)

“COVID-19 was a blessing, I am a better manager now, I learnt how to handle complex and confusing situation without my supervisor support always beside me.” (Participant AH10)

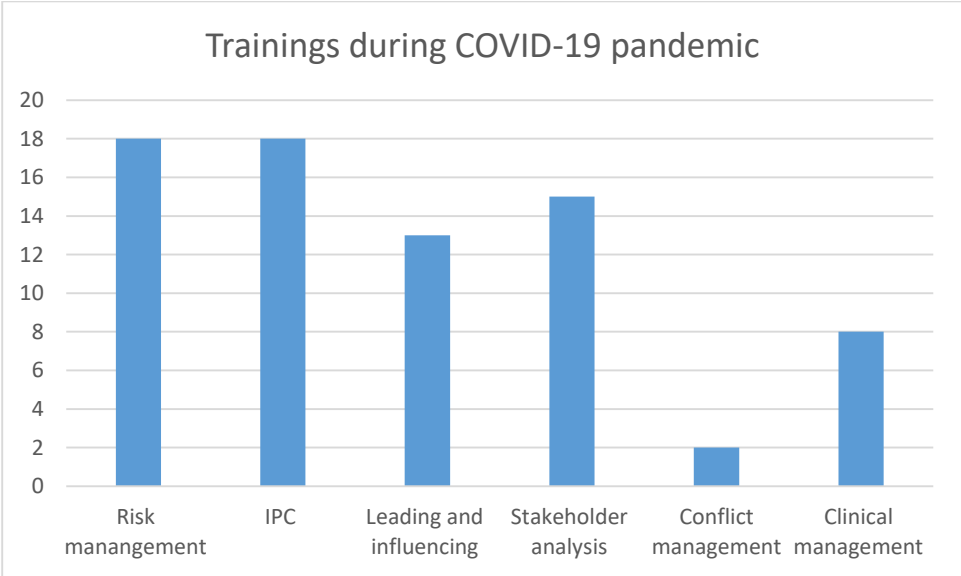


Figure 4.10: Training during the COVID-19 pandemic

The trainings involved leading and influencing as well as conflict management, which are the essential qualities needed during the crisis especially when dealing with different stakeholder with varying needs.

4.5.4 Trust

The research question: What is your opinion about the level of trust in the XYZ PHC facility during the COVID-19 pandemic and its influence on ERM?

Level of trust played an important role in COVID-19 management among staff and patients. Some patients and staff didn’t believe in taking COVID-19 vaccination due to their cultural and religious faiths, which increased their chance of acquiring the disease. Majority of participants (83,3%) had to come to work to provide the services while

they knew that they were at higher risks of infection. Reckless behaviour of member of the communities of not adhering to safety measures didn't deter them from their duties because they trusted the system and the XYZ PHC's facility management. The XYZ PHC facility was a dedicated COVID-19 site and, therefore, a majority of the participants reported high levels of trust and fear of disappointing colleagues as the key to continuing providing the services to patients even during higher peaks of COVID-19.

Some of the participants' statements on their experiences during the COVID-19 epidemic are listed here.

“When COVID-19 started everyone was afraid to die because of less information on the pandemic but as time went everyone became used to working under the circumstances.” (Participant AH07)

“Mistrust ensued within employees and Department of Health to due lack of PPE, vaccinations and lack of emotional support at the beginning. It was stressful at first but we became stronger when we realised that everyone is managing COVID-19 under the same circumstances, sometimes even if worse conditions than us.” (Participant AHO4)

4.5.5 Information communication and technology

The research question: How crucial was information technology in the management of COVID-19 during the crisis?

Majority of participants reported a surged use of medical technologies that was utilised to decrease the spread of the disease during the disaster. Digital technology was use to trace and track patients as well as providing training, medical consultations, healthcare services, and community surveillance.

“It was crucial as no contact was encouraged, more digital friendly ways of communication and information sharing were made available and shared. It improved communication and introduced new technology in the facility.” (Participant AH10)

“COVID alert app was useful and effective, it really assisted us in community surveillance by alerting other people of COVID-19 suspects next to them, but it increased stigma among community members.” (Participant AH14)

Even though technology was a fantastic tool for communication, a few individuals expressed annoyance and rage due to network signal issues. It proved that the COVID-19 epidemic hastened the facility's adoption of smart technology, which has improved patient outcomes.

“Communication was a glue to our strategy, we discuss, argued, shouted but finally we listening to each other and finally in times of despair we cried together.” (Participant AHO3)

4.5.6 Organisational structure

The research question: What is your opinion regarding the organisational structure that was used to address the COVID-19 pandemic in the XYZ PHC facility?

Organisational structure provides and maintain infrastructure to assist and improve systems and processes to achieve organisational goals. Majority of the participants reported that organisational structure was effective, flexible and promoted critical thinking and team work.

“All parties had their own role to play, it which helped to ingest and integrate work to be done, but we took long time in meeting. At least we could manage upwards for the first time in this facility. I mean the really worm view thinking instead of top down approach always.” (Participant AH03)

Three participants (16.7%) reported that the organisational structure was not effective, it was not flexible enough and it was top down structure. They reported that it was too big and wasted time and money, and the XYZ PHC facility could not sustain it post the COVID-19 crisis.

“The pandemic was addressed in many ways, it involves all staff even lower categories and all stakeholders, it was too big for effective decision-making and took long time to explain simple concepts to other non –facility based stakeholders.” (Participant AH011)

“The organisational structure was too rigid, it relied too much on national guidelines, which were too slow to catch up with the latest research” (Participant AH016)

“At times, I was frustrated by decision making processes in the Facility based COVID-19 command team, it took ages just to decide to allow pregnancy women to admitted in the facility rather than transferring them to Bloemfontein” (Participant AH002)

4.5.7 Organisational culture

The research question: How was the organisational culture in assisting to strengthen or weaken ERM in the XYZ PHC facility? Explain.

Effective risk management is made possible by organisational culture, which acts as a glue to hold together all the components of risk management procedures. The set of common values, conventions, symbols, behaviours, and beliefs that determine an organization's identity and members' conduct is known as its organisational culture (Encyclopaedia Britannica, 2024). Organisational culture affects an organization's performance and direction. It can assist to strengthen or weaken ERM in a facility. According to the majority of the participants, the XYZ PHC facility culture was conducive to effective ERM processes because it encourages team work, innovation and collaboration with different stakeholders and among the employees. It also made it possible for staff to put their life at risk for their patients by coming to work during high peaks of COVID-19 pandemic.

“Organisational culture made it easy for us to adapt to changing situations, organisational culture enabled a collaborative approach in times of crisis or difficulty. When a change was needed, people were willing to come together to make that the necessary changes to happen.” (Participant AH14)

“Organisational culture weakened and discouraged stigma and fear among staff by encouraging them to talk openly and free about being COVID-19 positive.” (Participant AH08)

“Because we were learning on our feet, its reduced ego and bad attitude. Its fostered the culture of trust, team work, critical thinking and problem solving among us. Its improved our leadership skills especially regarding resilience, listening, conflict management and managing upward.” (Participant AHO11)

4.5.8 Role of top management

The research question: What was the role of Top Management in developing ERM during the COVID-19 pandemic?

Top management’s dedication to the process and integration of risk management at all organisational levels set the standard for successful risk management. Majority of the participants reported that the main role of TM during the period was to avail resources and ensure that plans are carried out. It also involved a lot of listening and allay of staff fears.

“The pandemic was addressed in many ways, it involves all staff even lower categories and all stakeholders, the whole organisation was awake and working together, even Top management was listening to us for the first time. Total committed to one cause. Doctors also came to the party too, working with us. What an achievement.” (Participant AH011)

Five participants (27,7%) reported that top management spent most of their time in meeting, presenting and doing monitoring and evaluation of the situation without supporting operational staff.

“COVID-19 pandemic improved my leadership skills and job prospects, I’m now assistant manager of M&E, I was promoted last year, during COVID-19 pandemic, I was an isolation ward OPM. Our success during COVID-19 helped me to network and show my talents.” (Participant AH17)

‘Eish, Top management of the this facility knows best, its meeting, meeting one after other but while we struggled with our overtime payment and more patient load “Participant AH 05)

4.6 Criteria are used to assess the effectiveness of enterprise risk management

This section discusses the overall views shared by participants about criteria used to evaluate the effectiveness of ERM.

4.6.1 Criteria were used to assess the effectiveness of enterprise risk management (benchmarks)

The research question: What criteria were used to assess ERM’s effectiveness?

It became evident during the interviews that the participants of the XYZ PHC facility used two main tools to assess the effectiveness of the ERM (Figure 4.11). On a daily basis, managers reported results using performance indicators from the units to monitor progress and effectiveness of new guidelines and protocols. As part of the Risk Management Committee, they indicated that they used a standardised risk management tool (benchmarks) to evaluate and monitor progress against set targets.

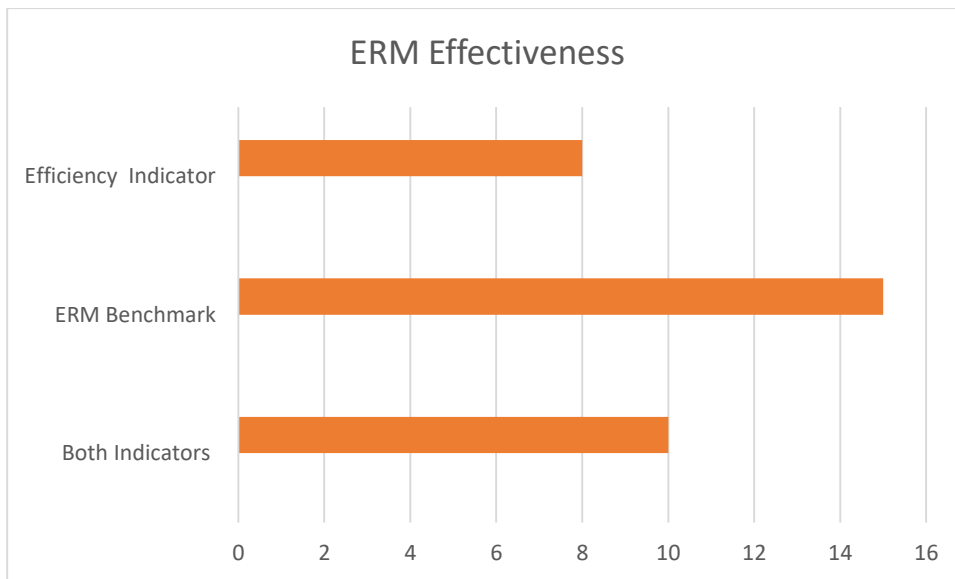


Figure 4.11: Criteria used to assess the effectiveness of ERM

“We used weekly data to measure our performance, especially staff morale, incidents of conflicts, patient’s safety incidents and complaints. We benchmarked ourselves against national and provincial targets especially regarding staff infection rates, excess deaths and our PPE and vaccination stock levels.” (Participant AH17)

“We used risk assessment benchmarks to classify risks into high, medium and low using our set targets, we checked, patient’s deaths, personnel infection, medical surveillance reports etc.” (Participant AHO12)

4.7 Impact of COVID-19 risk management on facility performances and awareness

This section addresses the effect of the COVID-19 risk management plan on the performance of the XYZ PHC facility, its personnel, and RM awareness.

4.7.1 Impact of the COVID-19 risk management strategy on performance

The research question: What was the impact of the COVID-19 risk management strategy on XYZ PHC’s performance?

All participants reported positive impact of COVID-19 risk management on the XYZ PHC facility’s performance and they also reported that COVID-19 infection improved facility image from a white elephant to a thriving hospital in the district. They reported that modified referral routes helped to increased patient’s volumes, which lead to better bed utilisation, patient day expenditure and increase revenue collection.

“It made a huge impact, Facility performance improved, as quality of care was strengthened by measures in place Risks management strategy encouraged better safe practices to handle COVID-19 infections and its related complications.” (Participant AH03)

“According to feedback it impacted positively as there were strategies and plans in place to address certain risks, it increased BUR, team work, as well as organisational culture. It reduced the costs of tests done by introducing rapid tests later in the system.” (Participant AH17)

4.7.2 Impact of the COVID-19 pandemic on ERM

The research question: What was the impact of the COVID-19 pandemic on ERM awareness in the XYZ PHC facility?

The facility did not have an approved disaster plan; this was eye opener. Majority of the participants (88,9%) reported that before COVID-19 pandemic, they didn't understand importance of disaster plan in managing communal disaster, they were saw disaster as the responsibility of the municipality. However, due to the COVID-19 experience, they are more than ready to part of any disaster plan in the district.

“It improved my knowledge of risk and disaster management, I'm more open minded now and I respect other community stakeholders now. COVID-19 pandemic helped me understand other stakeholder's role in ERM more. It also made me more aware of the importance of planning.” (Participant AH01)

4.7.3 Impact of the COVID-19 infection on staff

The research question: What was the impact of the COVID-19 infection on individual staff, according to you?

The participants stated that they did not remember encountering a problem with staff refusing to provide services during the pandemic even though, they knew the risk of acquiring infection was higher than general population. But majority of the participants reported sick due to stress and anxiety. Majority of participants (61,1%) also reported they noticed high level of absenteeism after colleagues or colleagues' facility death.

“The impact was bad at first and we were afraid to get infected but as most staff became positive and not die we carried on, without psychological help. We built immune for it.” (Participant AH09)

“Most of our staff were infected, shortage of staff in the facility become a problem due to increase absenteeism, stigma and stress. This put a burden on HR especially regarding overtime and allocation staff.” (Participant AH08)

“Yes and no, there were aspects like reporting that were managed well but other aspects such as staff morale or personnel motivation was difficult.” (Participant AH09)

According to eight participants (45%), they were under intense pressure to comply with vaccination requirements even though they went against their personal, cultural, and religious convictions. This resulted in elevated anxiety levels and heightened confrontation with their superiors.

4.7.4 Management of the COVID-19 pandemic

The research question: Do you think that the XYZ PHC facility manages the COVID-19 pandemic well?

In spite of anxiety and uncertainty, the majority of participants (88,9%) expressed pleasure and satisfaction in the manner the XYZ PHC facility handled the COVID-19 outbreak. One participant reported as follows:

“Yes, our facility did excellently - yes, because we reduce mortality and morbidity.” (Participant AH7)

Another participant shared the sentiment as participant AHO7:

“We were thrown in the deep end but we can out stronger and better.” (Participant AHO17)

“COVID-19 management increased our motivation, resilience and team work, the team had no choice but to succeed, we did better than normally due to due increase collaboration among different stakeholders.” (Participant AHO10)

The statements above indicate that the participants think that the XYZ PHC facility succeeded against all odds during the pandemic.

4.8 Effectiveness of RM process used to develop the COVID-19 RM Strategy at XYZ PHC facility

The effectiveness of the RM process utilised to create the COVID-19 RM strategy at the XYZ PHC facility is the main topic of discussion in this section.

4.8.1 Effectiveness of RM process used to develop COVID-19 Risk Management Strategy

The research question: According to you, how effective was the risk management process used to develop the COVID-19 risk management strategy at XYZ PHC facility? Was it effective, not effective, or highly effective?

Majority of the participants stated that the XYZ PHC facility's COVID-19 risk management strategy was developed through an effective risk management approach (Figure 4.12). They reported that the facility's risk management strategy is simple and clear to understand, but the challenges lays in its implementation especially proper monitoring and reviewing stages because of use of a cumbersome Risk register and benchmark for a small facility such as the XYZ PHC facility.

One participant reported the following when asked about the processes used to develop the COVID-19 RM Strategy: *“Highly effective, it was helped by excellence leadership of chairperson, it promoted team work and integration of strategies and as well as operational resilience.”* (Participant AHO9)

Another participant also agreed with Participant AHO9:

“We were thrown in the deep end but we came out stronger and better, we conquered” (Participant AHO17)

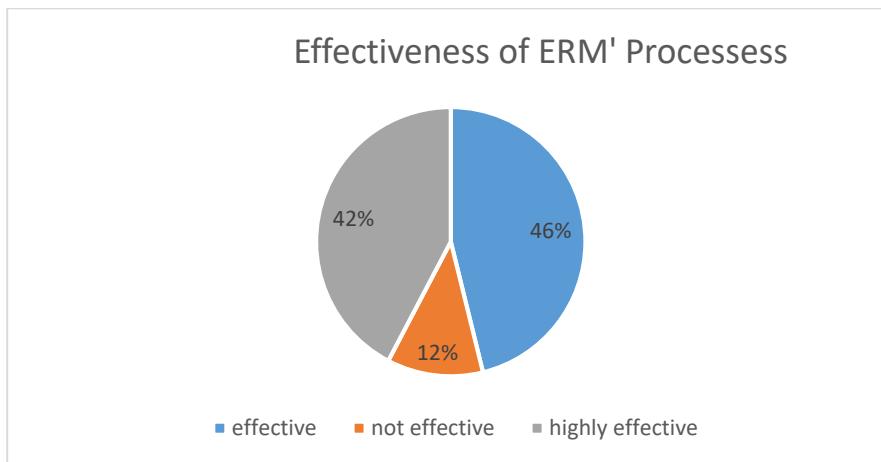


Figure 4.12: Effectiveness of the ERM processes

The researcher didn't follow up with those who stated that RM process used to develop COVID-19 Risk Management Strategy was not effective. Two participants (12%) reported that it was not effective because the facility transferred complicated cases to referral hospitals resulting in better outcome for the facility compared to others in Margaung Metro.

'Not effective, it was a lot of confusion, processes changed daily with new information and research, anyway most of the complicated patients were referred to Margaung metro facility for further management' (Participant AHO7).

'Not effective, ERM processes were not followed, we listened to provincial COVID-19 command team, they gave us instructions from the top' (Participant AHO11).

4.9 Identify mechanisms to improve enterprise risk management

The research question: How can XYZ PHC's enterprise risk management strategy be improved to cope better with future risks such as the COVID-19 crisis?

Mechanisms stated in 4.9.1- 3 were identified as way to improve ERM implementation in the facility during pandemic. Best practices are integrated in the ERM facility's SOP and protocols to mitigate against future risks, while valuable lesson are powerful insight that the facility learnt during its experience with COVID-19 pandemic.

4.9.1 Valuable lessons

The COVID-19 pandemic's unexpected crisis gave the XYZ PHC facility a new norm. A portion of the knowledge gained during this time should be applied to enhance the facility's present ERM procedures. The majority of participants gave positive feedback regarding the benefits of using live, interactive technology in ERM strategy. They claim that it facilitates quick decision-making, which is crucial in an emergency.

“Everything and every day was a risk, we treated everything as such with constant surveillance helping to reduce those identified risks, smart technologies help to improve patient experience of care and solutions urgent and complex problems.” (Participant AHO07)

Some participants (27,7%) reported that they experienced mental stress due constant pressure from treating severely ill patients without sufficient PPE and vaccination as well as experience of high level of stress due loss of close colleagues.

“COVID-19 was too dangerous, we are so lucky to survive it, it killed everyone, rich or poor, it killed.” (Participant AHO17)

4.9.2 Best practices

According to WHO (2017), best practices are collections of procedures and approaches that yield the best outcomes, boost productivity, and create organised workflows. The study's participants said that the XYZ PHC facility should keep employing technology as a key component of its COVID-19 RM strategy to engage with patients and stakeholders and produce the greatest outcomes possible for everyone.

“Technology was the backbone of the COVID-19 risk management strategy, we had to adapt faster or die. Even though some managers were born before technology but it helps to integrate different stakeholder expectation into one cohesive vision. Even though sometimes we had problems with connectivity in the facility (you, this place is rural mos.” (Participant AHO1)

During interviews, half of the participants reported cascading risk management practices to lower level of staff helped to improved staff buy in and staff morale and finally energy in the facility.

“Cascading risks downward made everyone feel like family, it strengthens compliance of protocols and guidelines especially with the cleaners.” (Participant AHO5)

4.9.3 Future improvements

According to Lebesse et al.,(2018), a Quality improvement plan (QIP) is a well-reasoned series of actions that apply evidence-based care to make the adjustments that will improve patient outcomes, system performance, and professional growth. With the use of this plan, the XYZ PHC facility is able to gradually enhance its healthcare systems, realising that it would take time and money to create a continual excellence and improvement culture. According to the research participants, all of them, sharing information across disciplines is a critical strategy to mitigate future risks and enhance the quality of treatment through the use of QIP in partnership with other stakeholders. One Participant AHO4 says: *“Increase and maintain Knowledge sharing across the disciples using continuous situational analysis as case studies for scenario planning.”*

Some participants (38,9%) indicated that a QIP should help to avail sufficient resources for future disaster such as climate change because availability of sufficient resource was also a game changer for the facility during the pandemic.

“Management must avail sufficient resources on time like they did during COVID-19 and remove Red tape, see how public health sector will improve performance drastically.” (Participant AH13)

“Appoint highly motivated and skilled staff, reduce deadwood. Please even during time of crisis hire right. Sometimes we were given delinquents to manage, wasting our time.” (Participant AHO1)

4.10 . Summary of research findings from qualitative research.

Table 4.1: Summary of key findings from qualitative research.

Main headings & subheading	Interview questions	findings
Understanding Enterprise risk management		
Understanding enterprise risk management	What is your understanding of enterprise risk management at the XYZ PHC facility?	All participants understood the definition of enterprise risk management
Enterprise risk management’s processes		
Objective setting	How was the COVID-19 risk management aligned with the organisational strategic objectives of the XYZ PHC facility?	<p>- 83% of the participants reported that COVID-19 risk management aligned with the organisational strategic objectives of the XYZ PHC facility by developing risks from facility strategic goals and integrating new or emerging risks in the facility risk register.</p> <p>- 6% of participants indicated that COVID-19 risk management was aligned to national government goals, while another 11 % of the participants reported that it was linked to the provincial department of health objectives by looking at the strategic objectives.</p>
Internal Environment	How often does the risk management committee meet in the XYZ PHC facility to discuss risk issues?	All research participants indicated that the enterprise risk committee meetings used to be held on a weekly basis during the COVID-19 crisis and are now held once a month at the XYZ PHC facility and quarterly at district level
Event Identification	What criteria were used to align identified risks with the organisation’s objectives and goals?	The majority of participants stated that the corporate risk definitions are provided by the Free State Department of Health's risk management policy, which

		<p>aids in classifying discovered risks in accordance with the department's selected risk classification.</p> <p>- 44.4% of participants also indicated that each risk is aligned to departmental goals in the risk register, and is allocated a target and a benchmark that gets monitored on a quarterly basis.</p> <p>22,2% of participants reported that risks are classified as low, medium, high and as financial and strategic risks.</p>
Risk assessment	What risk identification, assessment and tolerance setting were carried out at the departmental and operational levels during the COVID-19 pandemic?	-The majority of research participants reported that risk assessments including medical surveillance for staff and the facility's risk assessment were carried out.
Risk response	Which processes limited the impact of ERM during the COVID-19 pandemic?	<p>-The majority of participants reported poor planning and lack of guidelines as the main bottlenecks after the lack of PPE and vaccination.</p> <p>- 16.6% of the participants reported stigma and fear of death as one of the greatest psychological obstacles that led to delayed staff and stakeholders buy-in in patient management.</p>
Control activities	How is the effectiveness of the current risk management policies, guidelines and practices monitored for further improvement plans?	<p>The majority of research participants (72.2%) utilised meetings as a control platform to monitor progress of implementation of policies and guidelines, while about 33.3% of participants used risk monitoring instruments and data analysis.</p> <p>Others (11%) used quality improvement to monitor current risk management policies, guidelines and practices for effectiveness</p>
Information & Communication	How crucial was information technology in managing COVID-19 during the crisis?	The majority of participants reported high usage of medical technologies during the pandemic to decrease the spread of the virus and help with communication.

Monitoring & reviewing	How was the process of reviewing COVID-19 risk management done in the XYZ PHC facility?	The majority of research participants reported that the reviewing process involved looking at hospital targets and epidemiology reports from the experts.
Critical success factors of effective enterprise risk management		
Top management	What was the role of Top Management in developing ERM during the COVID-19 pandemic?	The majority of the participants reported that the main role of Top Management during the pandemic was to avail resources and ensure that strategic and operational plans are carried out well.
Organisational culture	How was the organisational culture in assisting to strengthen or weaken ERM in the XYZ PHC facility? Explain.	The majority of the participants reported that the XYZ PHC facility culture was conducive to effective ERM processes because it encouraged team work, innovation and collaboration with different stakeholders and among the employees.
Communication	What communication methods were used to manage COVID-19 infection in the XYZ PHC facility?	All research participants confirmed the use of technology as means of communication during the COVID-19 pandemic was effective and useful.
Organisational structure	What is your opinion regarding the organisational structure that was used to address the COVID-19 pandemic in the XYZ PHC facility?	The majority of the participants reported that the organisational structure was effective, flexible and promoted critical thinking and team work.
Training	What type of training was offered to HCW about the COVID-19 infection risk at the XYZ PHC facility?	16.6% of participants reported that the organisational structure was a top-down structure that was too big and rigid and inflexible.
Trust	What is your opinion about the level of trust in the XYZ PHC facility during the COVID-19 pandemic and its influence on ERM?	The majority of participants expressed positive experiences with training programmes during the COVID-19 pandemic was effective and useful.
Assessment criteria for effective enterprise risk management		
Criteria	What criteria were used to assess ERM's effectiveness?	75% of the participants reported that ERM benchmarks were used as criteria to assess the

	How was the COVID-19 risk management strategy measured against the performances of XYZ PHC outcomes?	<p>effectiveness of the enterprise risk management, while 40% of them indicated that efficacy indicators were used as criteria to assess the effectiveness of enterprise risk management.</p> <p>Additionally, 50% of participants reported that both ERM benchmarks and efficacy indicators were used as criteria to assess the effectiveness of enterprise risk management.</p> <p>The majority of participants reported a sense of pride and satisfaction about the way the XYZ PHC facility managed the COVID-19 pandemic in the midst of fear and uncertainty.</p>
Impact of COVID-19 risk management strategy on the XYZ PHC facility performance and awareness		
Impact on organisational performance, risk management awareness and staff	What was the impact of the COVID-19 risk management strategy on XYZ PHC facility's performance	The vast majority of participants (90%) reported a positive impact of COVID-19 risk management on the XYZ PHC facility's performance.
	What was the impact of the COVID-19 pandemic on ERM awareness in the XYZ PHC facility?	The majority of the participants (88%) reported that the COVID-19 pandemic made them understand the importance of disaster plans or crisis preparedness.
	9. What was the impact of the COVID-19 infection on individual staff, according to you?	<p>The majority of participants also reported they noticed high levels of absenteeism of staff after facility colleagues' deaths during the first COVID-19 wave period; afterwards absenteeism generally reduced to the normal level.</p> <p>About 45% of participants stated that they were put under intense pressure to take vaccines, even though it was against their personal, cultural, and religious convictions.</p>
Effectiveness of RM process used to develop the COVID-19 RM strategy at XYZ PHC facility		
	According to you, how effective was the risk management process used to develop the COVID-19 risk	The majority of participants (88%) reported that the risk management process used to develop the COVID-

Measure of effectiveness	management strategy at the XYZ PHC facility? Was it effective, not effective, or highly effective?	19 risk management strategy at the XYZ PHC facility was effective, with only 12% of the participants indicating that it was not effective.
	How effective was the process of developing ERM for the XYZ PHC facility? Explain, if you can.	About 46% of the participants stated it was highly effective
Identify mechanisms to improve enterprise risk management (best practices)		
Enhancement strategies	How can the XYZ PHC facility's enterprise risk management strategy be improved to cope better with future risks such as the COVID-19 crisis?	<p>The following mechanisms were identified as the strategies to improve current ERM practices in the facility by the majority of participants:</p> <ul style="list-style-type: none"> • Cascading risk management to all levels of the organisation • Appoint highly motivated and skilled staff and use expert advice • Provide sufficient resources to mitigate depletion of resources • Increase and maintain knowledge sharing across the disciplines • Use smart and interactive technology to improve risk communication and surveillance
	Please be specific. Can any action or behaviour be implemented to improve the current practices of ERM in the XYZ PHC Health Care facility after the COVID-19 pandemic?	

(Source: self-complied by author)

Table 4.1 Summarised of key findings from qualitative research by linking them to the research questions. These findings will provide the basis for quantitative questionnaire in chapter 6. The following chapter will analysis these results.

4.11. Conclusion

The research study's primary conclusions were discussed in Chapter 4. Regarding their experiences with the risk management process, the participants' perspectives were heard. The study's participants generally indicated positive organizational and personal changes that contributed to the organization's growth. Their involvement strengthened the organization's reputation and raised employee and patient satisfaction. The outcomes of quantitative research are the subject of the next chapter.

Chapter 5: Qualitative results analysis

5.1 Introduction

Chapter 4 focused on presenting the research findings thematically, the main focus of this chapter is to analyse and discuss the qualitative findings based on the research questions. The keys themes are linked to the secondary objectives. The following three secondary research questions will be used as the heading of this chapter:

- How can the XYZ PHC's enterprise risk management strategy be improved to better cope with future threats like COVID-19?
- What are the criteria used to assess the effectiveness of enterprise risk management?
- What are the critical success factors for effective enterprise risk management procedures?

5.2 A discussion and analysis of key themes

The results in Chapter 4 examined the effectiveness of risk management advancements worked to create a COVID-19 risk management at the XYZ PHC facility in a rural Free State Province town. Figure 5.1 provides a summary of the main themes of the qualitative research.

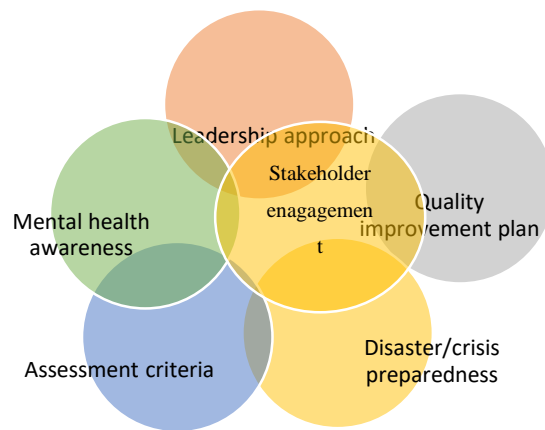


Figure 5.1: Key research observations

Two assessment criteria were identified to assess effectiveness of ERM implementation, while stakeholder management was showed to enhance its effectiveness. Leadership approach, mental health awareness and disaster preparedness are strategies identified to enterprise risk management processes.

5.3 How can the XYZ PHC’s enterprise risk management strategy be improved to better cope with future risks like COVID-19?

5.3.1 Leadership approach

The research findings in Chapter 4 revealed a well-coordinated, multi -disciplinary leadership and management approach in the XYZ PHC facility during the study. Factors of this leadership approach is shown in Figure 5.2.

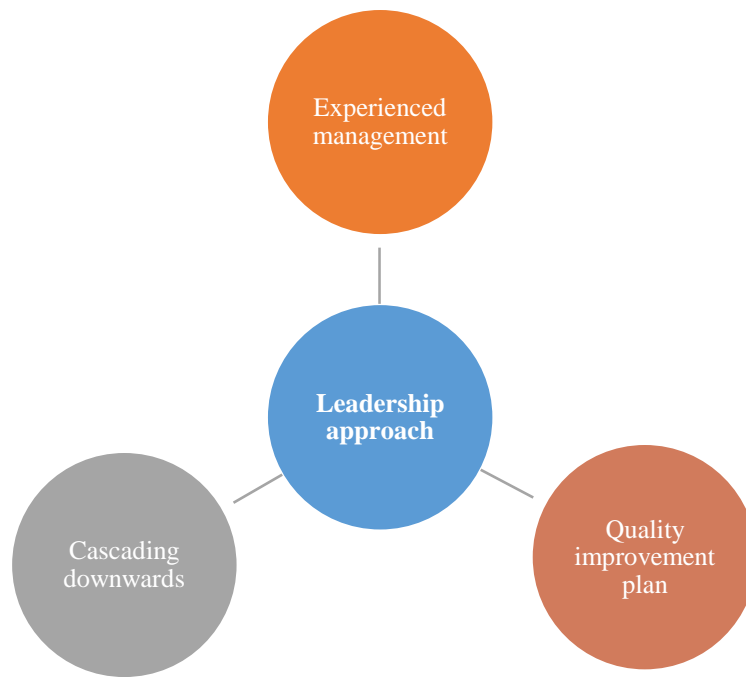


Figure 5.2: Factors of leadership approach

5.3.1.1. Experience management

Fakhruddin et al. (2020) claim that New Zealand's early leadership and audacious response to the COVID-19 epidemic contributed significantly to the country's success. They said that New Zealand was able to avoid widespread transmission that would have overwhelmed the medical system and its intrinsic implications, such as a widespread scarcity of testing and personal protective equipment, because of early and forceful action taken by the country's leadership and administration.

The research findings in Chapter 4 revealed capable and experienced management in the XYZ PHC facility during the study. Most of the managers have more than 5 years of work experience and seemed to be experienced in risk management. Since most of them are in middle management, they also appeared to know the key role of management, which involves planning, organising, leading, and controlling. The majority of participants were involved in creating and implementing COVID-19 management in the XYZ PHC facility. The participants reported that they were involved in management activities, as shown in Figure 5.3



Figure 5.3: Leadership and management roles during the COVID-19 pandemic

5.3.1.2. Cascading downwards

Cascading downwards is a process where the risk management processes are performed at lowest level of management in a facility. It involves decentralising decision-making to lower category of staff at the unit’s level from facility RM’s committee.

The Department of Health risk management policy states clearly that risk management is the responsibility of all employee and it is expected that they must include risks in their daily activities. The function of leadership and management is to ensure that every staff member has the capacity in terms of skills, training, knowledge and access to information and resources to carry out their risk management duties.

Participants reported that a key solution to cascading downwards would be to train and mentor in risk management for these staff, as well as integrating all levels in the risk management processes per department or areas of responsibility. Half of the participants indicated that cascading risks should also involve stakeholders and staff outside the XYZ PHC facility to prepare them for future risk such as climate change that does not recognise man-made borders, and, therefore, a community risk management and disaster plan should be developed and piloted before the actual disaster occurs again.

5.3.1.3 Quality improvement plan

According to Campbell et al (2000), quality care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes. QIP is one of the tools that Department of Health and the XYZ PHC facility uses to achieve its strategic objectives. It is a roadmap to improve the quality of the health system in an incremental fashion using the latest professional knowledge that is evidence based. These changes brought by QIP should lead to better organisational performance and effective system. The Quality Improvement Plan should ensure a system or processes that are safe, effective, client-centred, timely, efficient and equitable provision of healthcare services to achieve desired health outcomes.

Participants reported that a QIP should cut across the entire facility and ensure that information knowledge is integrated in the organisation to succeed. They indicate that a live (interactive) information system will help to integrate a QIP across all levels and in all departments and, therefore, it will also help with risk communication and resource allocation. An information system is defined as a system that integrates data collection, processing, reporting, and use of information necessary for improving health service effectiveness and efficiency through better management at all levels of health services (WHO 2016). By integrating these systems, it will help facility managers to profit from accurate and timely health data and strengthen ERM's monitoring and evaluation. This can, therefore, improve the effectiveness and efficiency of health care services, leading to better outcomes for the XYZ PHC facility.

Technology also has an important role to play when allocation resource in the resource constrained facility. Resource risk management involves identifying potential risks to resources and taking appropriate measures to mitigate them. Resource risk management is the process of identifying, assessing, and mitigating risks to the availability, capacity, and capability of resources required for a program. It involves analysing potential risks that could impact the program's resources and developing strategies to minimise their impact or prevent them from occurring altogether. Participants indicated that a quality improvement plan help to avail sufficient resources such as smart technology for future disaster which will strengthen Risk management processes in the facility.

5.3. 2. Disaster or crisis preparedness plan

The majority of the participants reported lack of preparedness as one of the major stumbling blocks to effective RM in the XYZ PHC facility during COVID-19 pandemic. A disaster plan is a crucial tool to help facilities and communities when an emergency or crisis happens and resources are both limited and depleted. A disaster plan is a written, approved, implemented, and periodically tested program specifically outlining all actions to be taken to reduce the risk of avoidable disaster and minimise the loss should a disaster occur (Brazer 2011). The plan should be based on a critical and thorough review of potential disasters to the facility, as well as its geographic location or industry. It is essential to ensure that the actions to be envisioned should lead to having more control over the pending or identified risks. In ERM, straight to the point actions can lead to better results and timely outcomes (Richter et al., 2020) and, therefore, disaster plans should have RM at the its core.

To every organisation, there are limitations to what they can do during disaster because most have a limited budget and scope of operations. So taking time to comprehensively state, and agreeing on the stated risk management strategy, will help at the early stages of organisational development and growth process. Therefore, a new facility such as the XYZ PHC facility needs to test its risk management plans regularly to ensure that they remain viable to the organisation and be adequately positioned to ensure that the organization functions in optimum service delivery to the client's needs and its organisational structure is improved and modified regularly to ensure a safe future (Hua et al. 2020). Majority of the participants reported that before COVID-19 pandemic, they didn't understand importance of disaster plan in managing communal disaster, they were saw disaster as the responsibility of the municipality. However, due to the COVID-19 experience, they are more than ready to part of any disaster plan in the district.

5.3.3 Mental health awareness

Mental health has been treated as a peripheral and insignificant part of the health sector (Burns 2011). This has been to the detriment of those who live with mental illnesses, undermining and limiting access and quality of mental health care services. The COVID-19 pandemic raised plight of health care workers in the XYZ PHC facility showing that they worked under a lot of factors that contributed to their mental health illness. Majority of the participants reported anxiety about immediate family members' exposure to COVID-19 infections and pressure to come work as some of the key causes of their mental illness that they need support with during the pandemic. The research participants stated that they were referred for individual therapy to the institution's in-house clinical psychologists and social workers; however, this referral happened in the third and fourth waves following the employment of these healthcare professionals in the district and facility.

5.4. What are the criteria used to assess the effectiveness of enterprise risk management?

5.4.1 Assessment criteria for effective enterprise risk management

The best way to gauge the effectiveness of risk management is not widely agreed upon. Department of Health evaluates the efficacy of its risk management implementation using benchmarks for risk management that are based on departmental or national targets. Another method of looking at the effectiveness RM of an organisation's is by determining the presence and functionality of its eight components of COSO ERM (COSO 2004:7). These elements serve as a benchmark for assessing ERM's efficacy. There must be no significant flaws in the components for them to be deemed present and operating efficiently, and risks must be taken within the parameters of the organization's risk tolerance.

In the event that strategic and operational goals are met, reporting is trustworthy, and compliance is upheld, COSO (2004:5) determined that ERM is effective. For instance, the standard deviation of an organization's aim can be used to gauge the performance of a strategy, and asset turnover—which is determined by dividing sales by total assets—can be used to gauge operational efficiency (Gordon et al. 2009:301-327).

Research participants reported that they monitored ERM strategy effectiveness using efficiency indicators on daily, weekly and monthly basis and evaluate its effectiveness on quarterly basis using a risk management bench mark. The efficiency indicators feed into quarterly indicators which are part of the risk management benchmark. The reviews reports are also submitted on quarterly basis as part of compliance and standard of Department of Health 'RM policy, which ensure that elements of ERM are present and functioning in the facility.

5.5. What are the critical success factors for effective enterprise risk management procedures?

5.5.1. Stakeholder engagement

Singapore's response to the COVID-19 pandemic has been deemed successful since it was able to maintain low infection rates and a robust economy. A well-led, well-coordinated, multi-stakeholder reaction and recovery effort was crucial to its success (Lai & Tan 2015). Multi-disciplinary approach was also one of the main factors that contributed to effective RM in the XYZ PHC facility. It helped the facility to manage risks in an integrated way with different stakeholders within a short time. Stakeholder engagement and management allowed for deep dialogue and better understand of the RM processes in the facility.

Participants reported that Stakeholder engagement and involvement was also critical during planning and implementation of the COVID-19 plan, as it allowed the facility to know who to use and when to be able to achieve its organisation goals. It acted as a bridge to community and other organisations, giving the facility’s access to their existing resources and communication channels to convey COVID-19 risk management strategy to all. Further, more, it enabled collaborative approaches in times of crisis and encouraged units or departments to adapt to change by learning from others. This result is consistent with findings from literature reviews, which define ERM as a process used by organisations across all sectors to evaluate, manage, finance, and keep an eye on risks from all sources in an effort to increase the organization's value to stakeholders both now and in the future (D'Arcy & Brogan 2001).

5.6. Summary of key themes.

Table5.1: Summary of key themes

Secondary research questions	Key themes
What are the criteria used to assess the effectiveness of enterprise risk management?	ERM benchmark and efficiency indicators were identified as criteria to be used to assess the effectiveness of enterprise risk management
What are the critical success factors for effective enterprise risk management procedures?	Stakeholder management was identified as critical success factor to enhance effective enterprise risk management implementation
How can the XYZ PHC’s enterprise risk management strategy be improved to better cope with future risks like COVID-19?	<p>The following mechanisms were identified as the strategies to improve current ERM practices in the facility.</p> <ul style="list-style-type: none"> • Leadership approach • Disaster preparedness • Staff mental wellbeing

The main conclusions from the literature review that will serve as the foundation for the data collection are highlighted in this section.

Key themes showed in Table5.1. are aligned to the three research questions and finding. In the following chapters, these themes will be assessed using quantitative instruments on large population of XYZ PHC facility.

5.7. Conclusion

This chapter's main objective was to analyse the study findings and summarise the topics that the qualitative research revealed. Key issues from the conversations will be used in a quantitative survey to examine the efficacy of the risk management procedure used to create a COVID-19 risk management at the XYZ PHC facility. The quantitative analysis of the mixed research will be the main topic of the upcoming chapter.

Chapter 6: Quantitative research results

6.1 Introduction

This study explores risk management progress used to develop a COVID-19 risk management in the XYZ PHC facility in rural town of Free State Province. Data is gathered over time in two consecutive periods using the exploratory sequential approach. Risk champions' (participants') thoughts and insights into the research questions were recorded during the interviews, and a questionnaire based on these findings and its analysis as well as and literature studies was developed to be used in the second phase of the study. As a result, although distinct, these two types of data are linked.

The results to be provided in this chapter will examine the respondents' quantitative evaluation of the risk management process' efficacy in creating a COVID-19 risk management in the XYZ PHC facility. The chapter will start with explaining the response rate of respondents, then follow by section where research respondents' level of risk management experience will be profiled. Afterwards the respondents will answer to questions relating research questions according to the research questionnaire in order to directly and effectively address the study aim and objectives. The following are the headings:

1. Response rate
2. Enterprise risk management experience
3. Understanding of Enterprise risk management
4. Enterprise risk management's process
5. Critical success factors for effective enterprise risk management
6. Impact of the COVID-19 risk management strategy on performance
7. Evaluation of effectiveness of the risk management process used to develop the COVID-19 risk management strategy.
8. Identified themes (best practices)
9. Enterprise risk management and COVID-19 infection

6.2 Response rate

At the XYZ PHC facility, 62 permanent employees were given a self-completion form with 26 items. Three questionnaires were discarded because they were incomplete, out of a total of 54 questionnaires that were fully completed and did not contain any missed questions. This ensures that the results are measurable and trustworthy. This corresponds to 87% of all questions that were distributed and fully completed, which were then utilised for analysis. This response rate is acceptable since the researcher intended to receive 62 (100%) responses in order to guarantee that the sample size would be representative of the population size. In order to guarantee a satisfactory response in terms of completed questionnaires, the researcher followed up with potential respondents by email-based reminders, phone calls, and direct contact. The researcher also used WhatsApp.

The researcher targeted middle and top employees for the study, which involved the staff doing the following occupations in the XYZ PHC facility, namely medical doctors, professional nurses, radiographers, pharmacists, Environment health practitioners, social workers, clinical psychologist, occupational health therapist, physiotherapist, audiologist , speech therapist, dieticians, security manager, health and safety officer, artisans, workshop managers, finance manager, HR manager, quality assurance , programme manager ,logistic and transport manager, cleaning supervisors, food service manager, M&E manager and complaint managers.

6.3 Enterprise risk management experience

The first section profiles research respondents’ level of experience looking at the following factors, level of ERM experience, duration of service, and level of management. Regarding their managerial experience, the responders were asked to tick the appropriate response.

6.3.1 Level of experience (risk management)

The research statement: Rate your level of experience in Risk management.

About 70,4% of the respondents rated their experience in risk management as moderate (Figure 6.1), furthermore, some respondents (22,2%) rated in high and while about 7.4% rated it low. The research participants appear to possess strong experience in risk management, which makes them suitable candidates to respond to inquiries pertaining to the research topics.

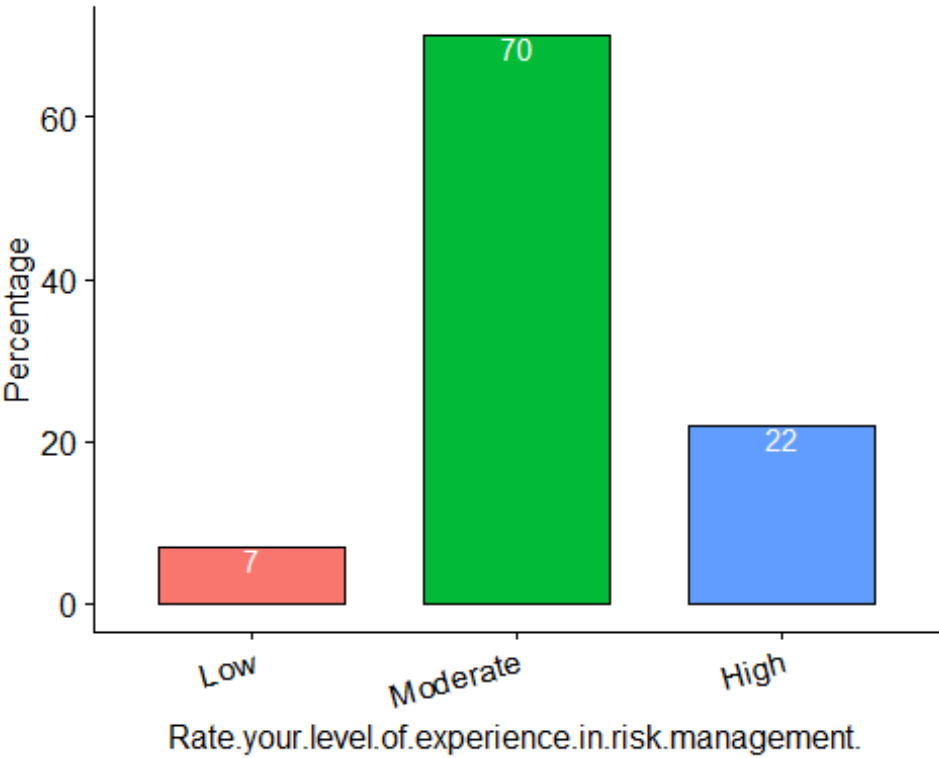


Figure 6.1: Level of RM experience

6.3.2 Duration of service

The research question: How long have you been an employee at this hospital?

Figure 6.2 shows that at the time the research was done, 50,9% of the respondents had worked for the organisation for five to ten years. 43,4% of the respondents who had worked less years ago came next. Approximately 5.7% of the participants have over ten years of job experience. The XYZ PHC facility is a fairly new facility, which was opened in 2015 by the Free State Department of Health with new staff and management and, therefore, the majority of staff were expected to have between 0-10 years' experience

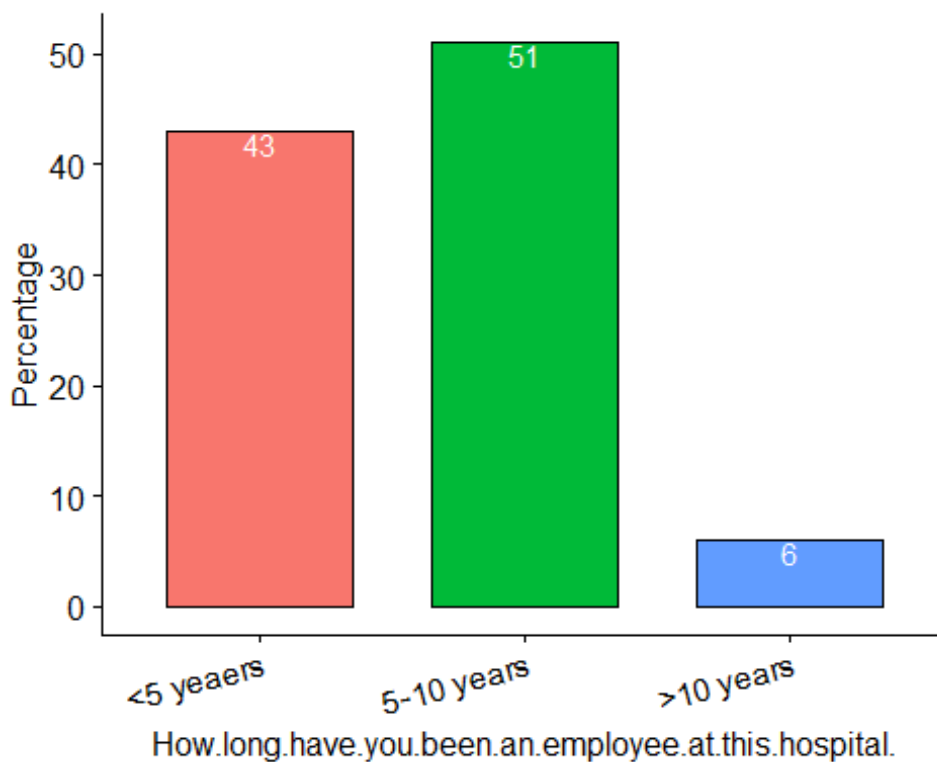


Figure 6.2: Duration of employment

6.3.3 Level of management

The research question: At what level of level of management are you now?

As expected, only a small percentage of respondents (7,8%) hold top management positions, and no respondents in lower management were included in this study. Figure 6.3 shows that the majority of respondents (92,2%) are in middle management positions. The study participants comprised extended management from the facility involved in the implementation of COVID-19 risk

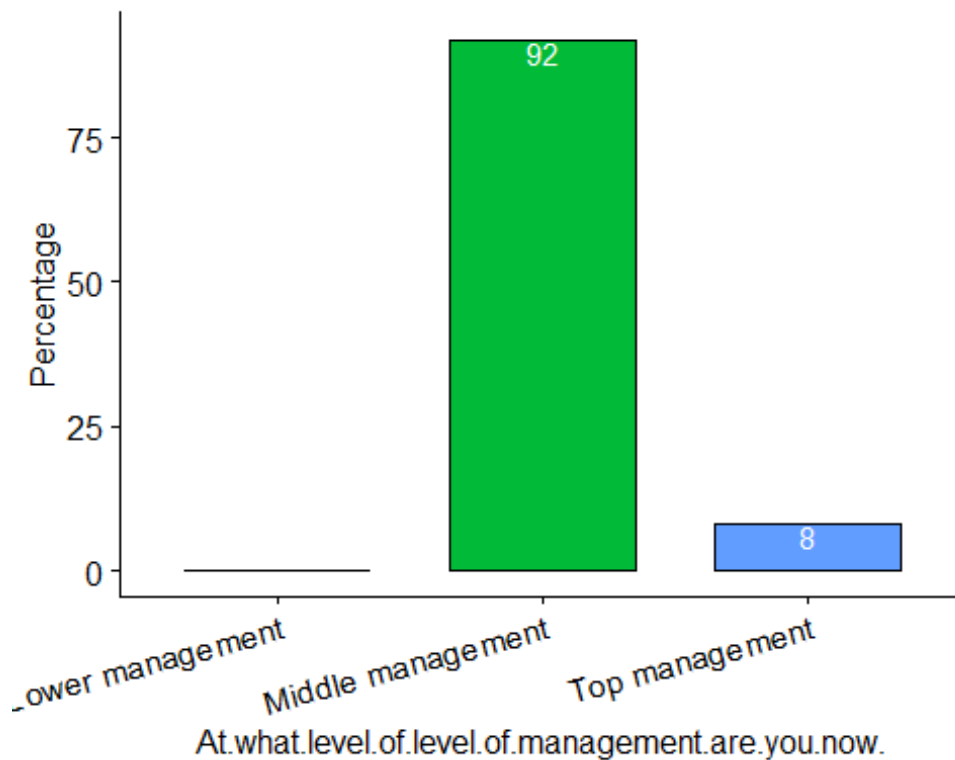


Figure 6.3: Level of management

The result finding reflected the research respondents have fairly good RM experience and half of the respondents have more than 5years work experience at work thus they should be able to help the researcher to answer the research questions.

6.4 Enterprise risk management

Subsequent sections, respondents were asked to rate the effectiveness of the risk management processes used to develop COVID-19 pandemic in the XYZ PHC facility using Likert Scale of 1 to 5 where 1 represented “Strongly Disagree” and 5 represented “Strongly Agree” respectively. The level of agreeability represents the agreement to the question relating the effectiveness of the risk management processes used to develop COVID-19 pandemic in the XYZ PHC facility.

6.5 Understanding of Enterprise risk management process

The research statement: I have a good understanding of risk management processes and activities in this hospital.

The respondents were asked to indicate if they have a good understanding of RM processes and its activities in the facility. the purpose of the question was to gauge the respondent's comprehension of the ERM. A total of 44,4% of respondents said they understood ERM well, and another 24,1% strongly agreed with the statement. Surprisingly, 7,4% of respondents strongly disagreed with the remark, whereas 22,2% of respondents were neutral about it. Lastly, the assertion was disputed by 1,9% of the respondents (Figure 6.4.0).

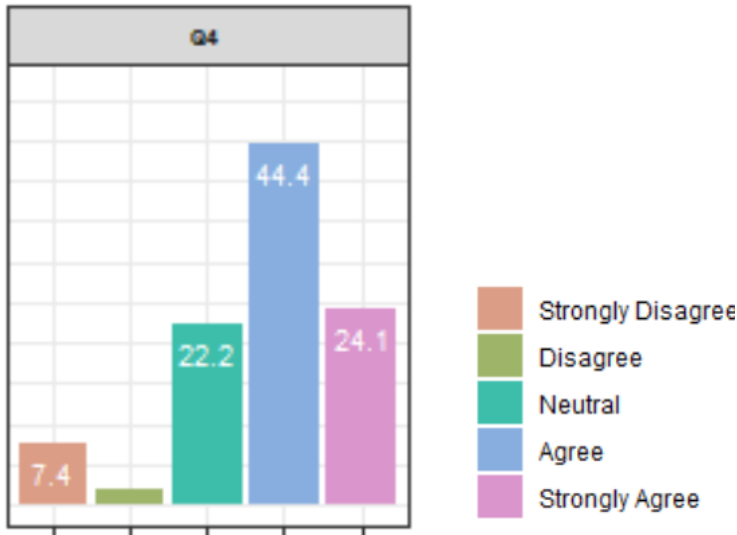


Figure 6.4.0: Respondents' answers regarding understanding of ERM process

The findings showed that all respondents with high RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.4.1). Majority of respondents (75%) with low RM strongly disagreed with the statement, while about 5% of respondents with moderate RM experience also strongly disagreed with the statement. 25 % of respondents with low RM experience were neutral about the statement and none of the respondents with low RM experience strongly agreed or agreed with the statement. 66 % of respondent with moderate RM experience either strongly agreed or agreed with statement and about 29 % of them were neutral about the statement.

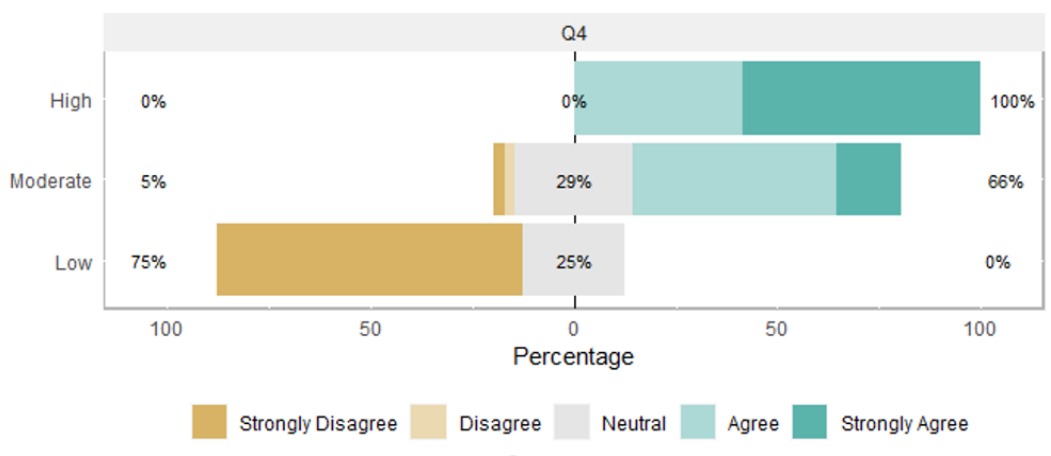


Figure 6.4.1: Respondents' answers regarding understanding of ERM process using different of ERM experience

The finding also showed that respondents with more than 10 years' work experience and respondents with 5-10 years' work experience strongly agreed or agreed with the statement (Figure 6.4.2). Majority of respondents (81%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 19 % of them are neutral about the statement .67% of respondents with more than 10 years' work experience either strongly agreed or agreed with the statement and 33% of those group were neutral about the statement. 22% of respondents with less than 5 years' work experience strongly disagreed or disagreed with statement and 22 % of the group were neutral about the statement, while 57% of the group strongly agreed or agreed with the statement.

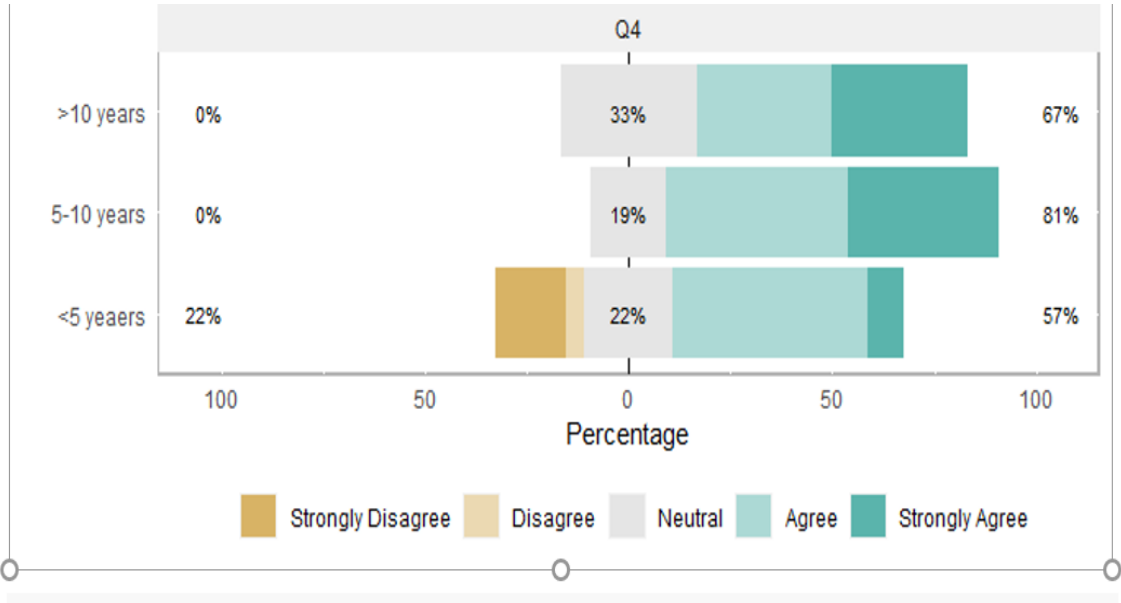


Figure 6.4.2: Respondents' answers regarding understanding of ERM process using duration of employment

Additionally, the findings showed that all majority of respondents on top positions either strongly agreed or agreed with statement and no one of them strongly disagreed or disagreed with the statement or was neutral about the statement (Figure 6.4.3). about 66 % of respondents on middle positions either strongly agreed or agreed with statement, but 9% of them strongly disagreed with statement and 26% of the group neutral about the statement.

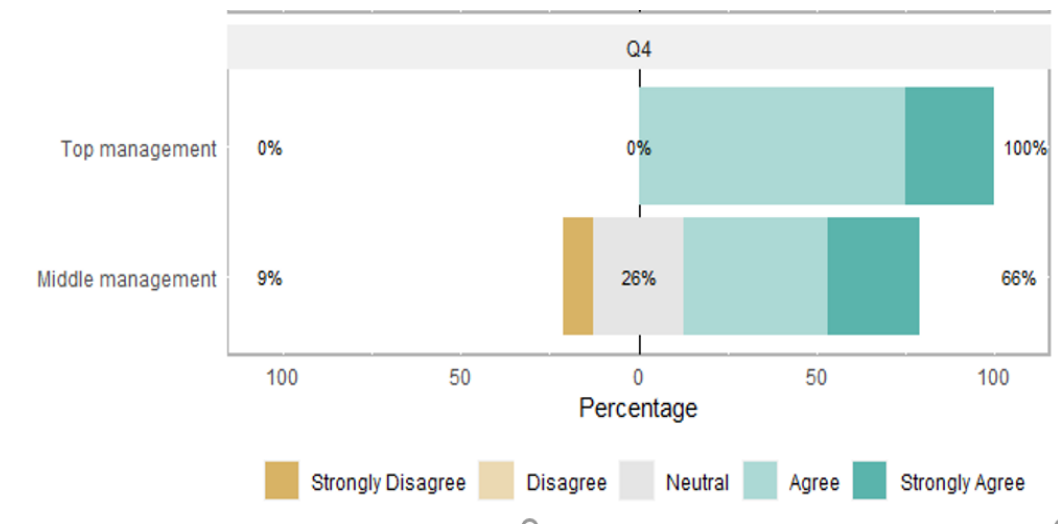


Figure 6.5.3: Respondents' answers regarding understanding ERM process using level of management

This result reflected that staff that has less than five years' work experience (22%) and low RM experience (75%) have low understanding of ERM and should be targeted for training on the understanding of ERM, while Top management and staff with more than 10 years' experience are likely to have a better understanding of RM understanding and can be used as mentors for others in the facility to instil the understanding of ERM.

6.6 Enterprise risk management 's process

According to COSO (2004:7), effectiveness of facility's ERM can be assessed by determining the presence and functionality of its eight pillars of COSO ERM. There must be no material deficiencies in the pillars for them to be deemed present and working properly, and risks must be taken in accordance with the organization's risk appetite. The eight pillars of ERM are as follows, objective setting, internal environment, event identification, risk assessment, risk response, control activities, information and communication and monitoring. In this study, it was determined that an element or pillar is present and functional when respondents strongly agreed or agreed with a statement (score of 4 & 5). It was determined that an element is weak or non-functional when respondents strongly disagreed with the statement (score of 1 & 2), and neutral might indicate that an element is present but not functional (score of 3).

6.6.1 Objective setting

The research statement: My hospital establishes and communicates explicitly risk tolerance levels or limits for all major risks.

Objectives setting is a phase where high level goals of the organisation are aligned with ERM to ensure that chosen objectives support and identify potential events that may affect its mission (COSO,2004). About twenty percent of respondents (20,4%) strongly agreed with the statement "hospital establishes and communicates explicitly risk tolerance levels or limits for all major risks, while 53,7% respondents also agreed with statement. A total of 22,2% of the respondents were neutral. No respondents strongly disagreed or disagreed with the statement (Figure 6.5.0).

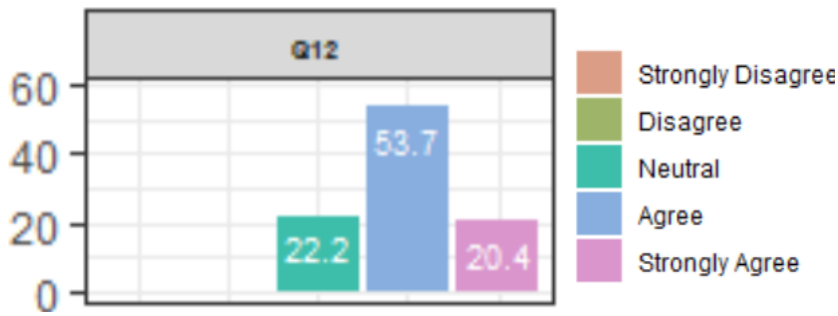


Figure 6.5.0: Respondents' answers regarding of objective setting

The finding showed that respondents with high RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.5.1). Majority of respondents (67%) respondents with low RM were neutral about the statement, some 27% of respondents with moderate RM experience were also neutral about the statement. only 33 % of respondents with low RM experience strongly agreed with statement and 73% of respondents with moderate RM experience either strongly agreed or agreed with the statement

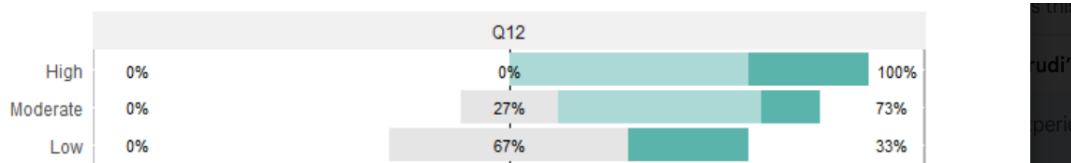


Figure 6.5.1: Respondents' answers regarding of objective setting using different of ERM experience

The finding also showed that respondents with more than 10 years' work experience agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.5.2). Majority of respondents (81%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 19 % of them are neutral about the statement. While about 73% of respondents with less than five years' work experience have either strongly agreed or agreed with statement and 27 % of them are neutral about the statement. No one strongly disagreed or disagreed with the statement.

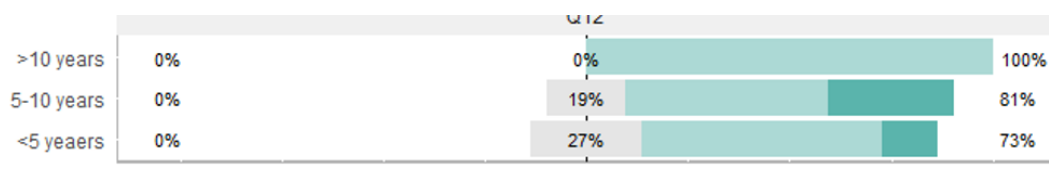


Figure 6.5.2: Respondents' answers regarding of objective setting duration of employment

Furthermore. The finding showed that majority of respondents on top (76%) and (73%) middle management positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the

statement (Figure 6.5.3). But about 25 % and 24% of respondents in top and middle position were neutral about statement.

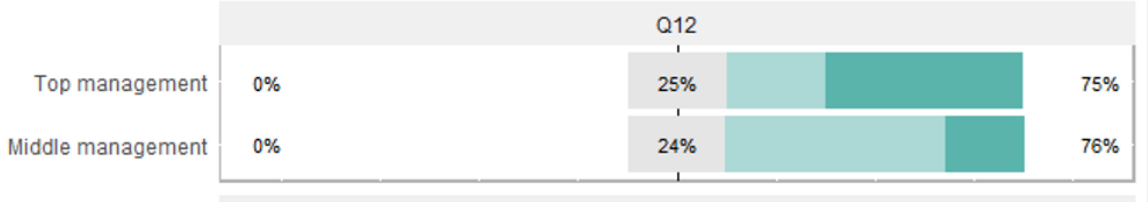


Figure 6.5.3: Respondents’ answers regarding objective setting using level of management

The results show that the majority of the respondents believe that the pillar (objective setting) is present and functional in the facility.

6.6.2 Internal environment

The research statement: The tone from senior management communicates the importance of risk management

The internal environment lays the basis of how ERM is viewed and addressed in an entity. It includes factors such as risk management philosophy and risk appetite, integrity, ethical values and the environment in which they operate. A total of 24,1% of the respondents strongly agreed with statement “The tone from senior management communicates the importance of risk management”, while 53,7% of the respondents also agreed with statement. Some respondents (3,7%) disagreed with statement and 14,82% were neutral. No respondents strongly disagreed with the statement (Figure 6.6.0).

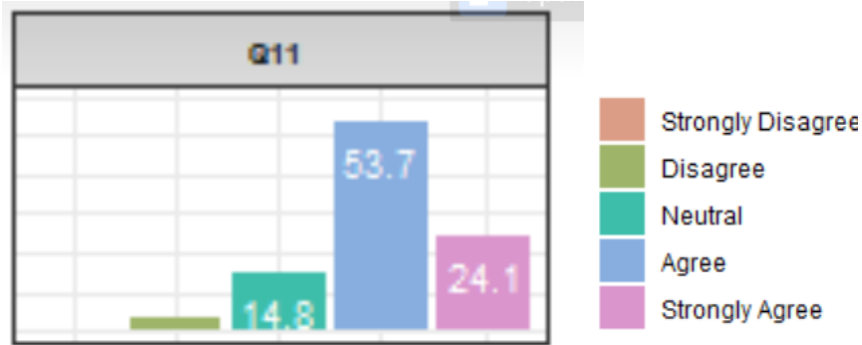


Figure 6.6.0: Respondents’ answers regarding internal environment

The finding showed that majority of respondents (75%) with low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.6.1). About 27% of respondents with high RM experience were neutral about the statement, followed by 25 % of respondents with low RM experience. While 9% of respondents with high RM experience disagreed

with the statement and some respondents with moderate RM experience also disagreed with the statement. Majority of respondents (>50%) respondents with moderate and high RM experience either strongly agreed or agreed with statement.

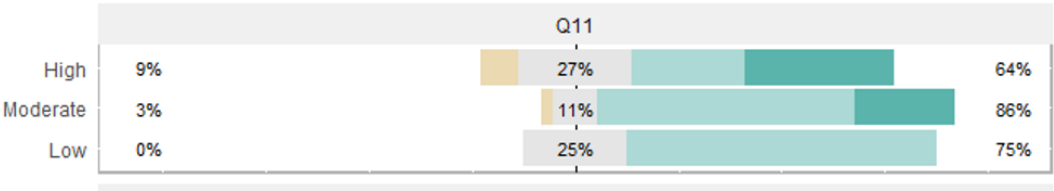


Figure 6.6.1: Respondents’ answers regarding internal environment using different enterprise risk management experiences

The finding also showed that respondents with more than 10 years’ work experience agreed with statement and no one among them respondents strongly disagreed but about 33% of the group were neutral with the statement (Figure 6.6.2). 91 % of respondents with less than five years’ experience have either strongly agreed or agreed with statement and only 9% of them are neutral about the statement. Some 8% of respondents with between 5- 10 years’ work experience disagreed with statement and 16 % of them are neutral about the statement, but majority (75%) of them either strongly agreed or agreed with statement.

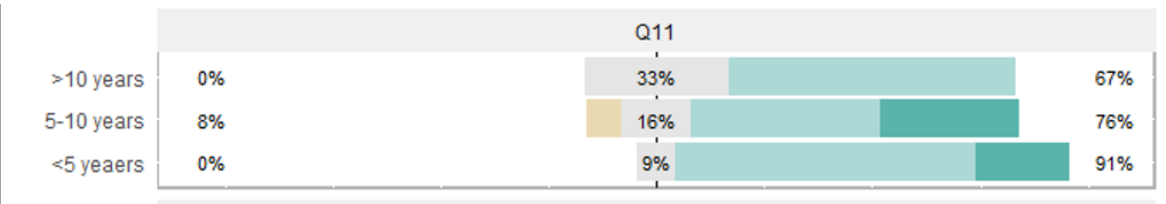


Figure 6.6.2: Respondents’ answers regarding internal environment using duration of employment

Moreover. The findings also showed that all majority of respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement or was neutral with the statement (Figure 6.6.3). 4 % of respondents on middle positions disagreed with the statement and 18% of the group were neutral about statement but majority (78%) of them either strongly agreed or agreed with statement.



Figure 6.6.3: Respondents' answers regarding internal environment using level of management

The results show that all top management and respondents who had more than 10 years' experience and moderate RM experience (86%) agreed that this pillar is present while some in who have high RM experience do not think is pillar is present and functional. The majority of the respondents with low RM and less than five years' work experience 91% supported the view that this pillar is present and functional.

6.6.3 Event identification

The research statement: My hospital identifies potential events affecting the entity's ability to successfully achieve its objectives

A total of 22,2% of the respondents strongly agreed with the statement "My hospital identifies potential events affecting the entity's ability to successfully achieve its objectives", with more than half of the respondents (59,3%) also agreeing with statement. Some of the respondents (3,7%) disagreed with the statement, while 11,1% of the respondents were neutral. No respondents strongly disagreed with the statement (Figure 6.7.0).

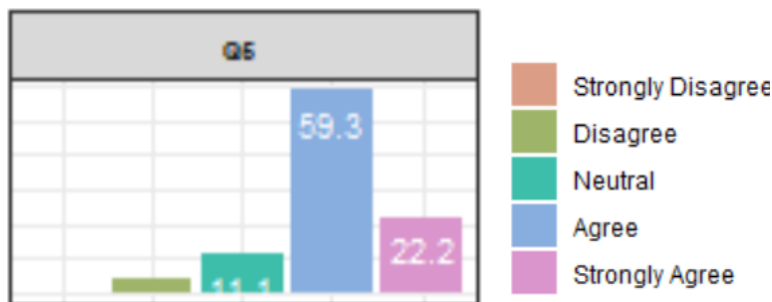


Figure 6.7.0: Respondents' answers regarding event identification

The finding showed that respondents with high RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement, but 9% of them were neutral about the statement (Figure 6.7.1). While all respondents with low RM experience and 81% of respondent moderate RM experience either strongly agreed or agreed with statement. Some (14%) respondents

with moderate RM experience were also neutral about the statement. And few (4%) among them even disagreed with the statement

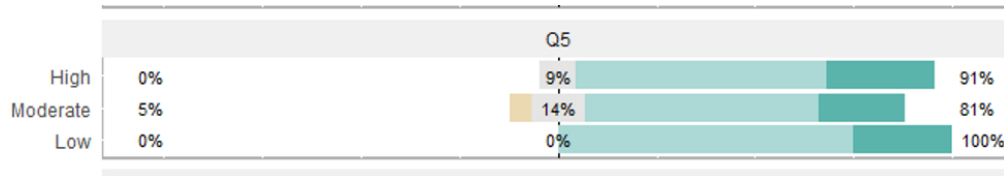


Figure 6.7.1: Respondents' answers regarding event identification using different enterprise risk management experiences

The finding also showed that respondents with more than 10 years' work experience agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.7.2). 91 % of respondents with less than five years' experience have either strongly agreed or agreed with statement and only 9% of them are neutral about the statement. Some 8% of respondents with between 5- 10 years' work experience disagreed with statement and 12 % of them are neutral about the statement, but majority (81%) of them either strongly agreed or agreed with statement.

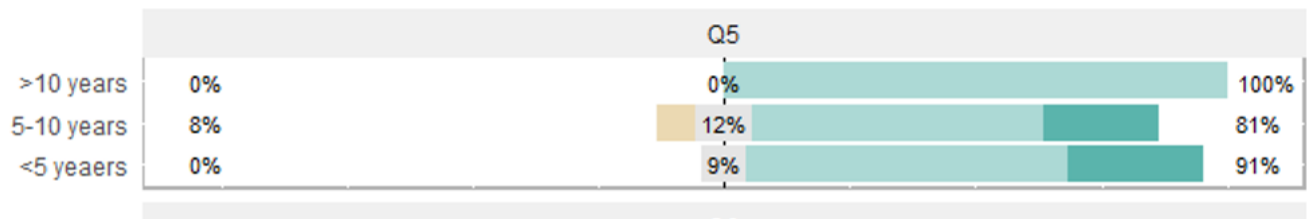


Figure 6.7.2: Respondents' answers regarding event identification using duration of employment

Additionally, the findings also showed that all majority of respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement or was neutral with the statement (Figure 6.7.3). 4 % of respondents on middle positions disagreed with the statement and 13% of the group were neutral about statement but majority (83%) of them either strongly agreed or agreed with statement.

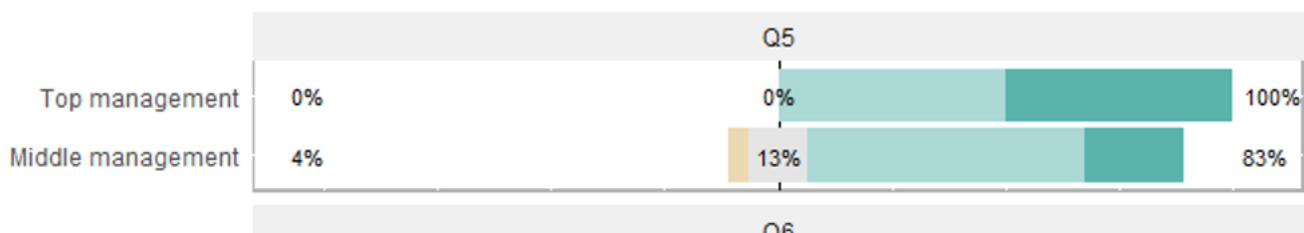


Figure 6.7.3: Respondents' answers regarding event identification using level of management

Majority of the respondents (59%) believed that this pillar is present and functional.

6.6.4 Risk assessment

The research statement: My hospital performs a formalised risk assessment process on a regular basis.

A total of 24,1% of the respondents strongly agreed with the statement “My hospital performs a formalised risk assessment process on a regular basis”, while more than half of the respondents (59,3%) agreed with statement. Approximately 11,1% of the respondents were neutral and 3,7% disagreed with statement. No respondents strongly disagreed with the statement (Figure 6.8.0).

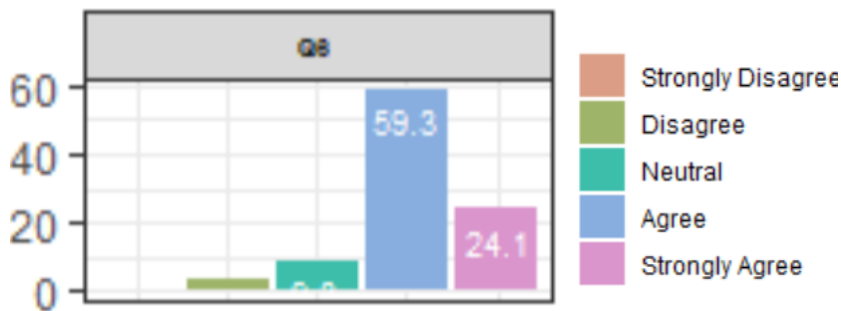


Figure 6.8.0: Respondents’ answers regarding risk assessment

The finding showed that respondents with high RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.8.1). majority of respondents (75%) with low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement, but about 25% of them are neutral about the statement. Majority of respondents (84%) with moderate RM experience either strongly agreed or agreed with the statement but about 11% of them are neutral about the statement while 5 % of them disagreed with the statement.

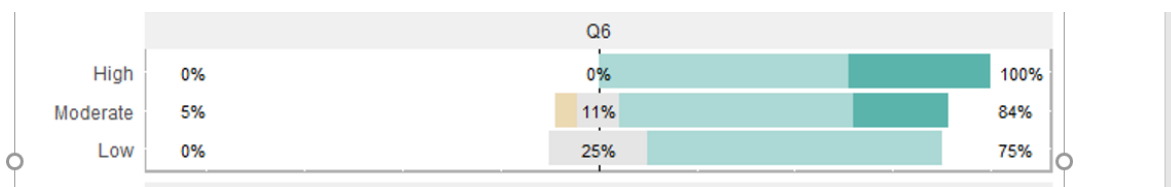


Figure 6.8.1: Respondents’ answers regarding risk assessment using different enterprise risk management experiences

The finding also showed that majority of respondents (67%) with more than 10 years’ work experience agreed with statement and no one among them respondents strongly agreed or disagreed but some 33% of them were

neutral about the statement (Figure 6.8.2). Majority of respondents (92%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 4% of them are neutral about the statement, while other 4 % of them disagreed with statement. 86% of respondents with less than five years' work experience have either strongly agreed or agreed with statement and 9 % of them are neutral about the statement. About 5% respondents with less than five years' work experience also disagreed with the statement.

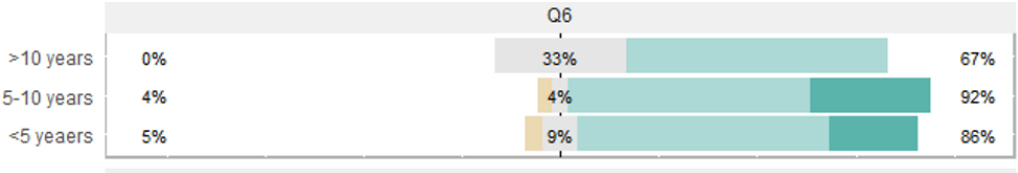


Figure 6.8.2: Respondents' answers regarding risk assessment using duration of employment

Furthermore. The finding also showed that all majority of respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement (Figure 6.8.3). Some 11% of respondents on middle position were neutral about statement and 4 of the group disagreed with the statement, while majority (84%) of them either strongly agreed or agreed with statement.



Figure 6.8.3: Respondents' answers regarding risk assessment using level of management

The results show that this pillar is presenting and functioning in the XYZ PHC facility, even though some respondents (3%) did not believe that this pillar is functional.

6.6.5 Risk response

The research statement: For each risk event, my hospital determines the appropriate risk response option of avoiding, reducing, sharing or accepting the risks

A total of 31,5% of the respondents strongly agreed with the statement “Each risk event, my hospital determines the appropriate risk response option of avoiding, reducing, sharing or accepting the risks”, with 59,3% of the respondents also agreeing with the statement. Some respondents (7,4%) were neutral and no respondents strongly disagreed or disagreed with the statement (Figure 6.9.0).

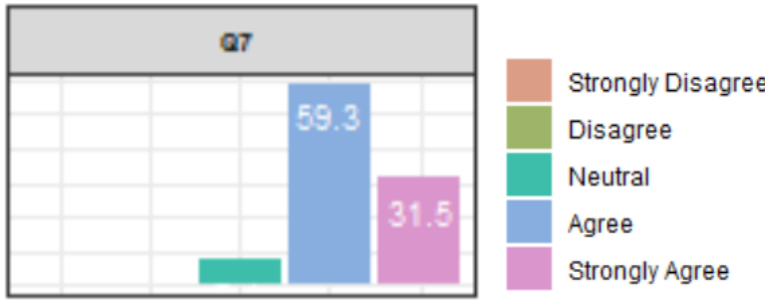


Figure 6.9.0: Respondents’ answers regarding risk responses

The findings showed that all respondents with high and low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.9.1). Majority of respondents (89%) respondents with moderate RM experience also either strongly agreed or agreed with statement, while 11% of them were neutral about the statement.

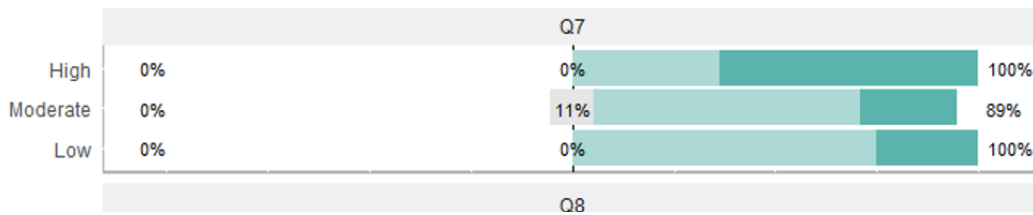


Figure 6.9.1: Respondents’ answers regarding risk responses using different enterprise risk management experiences

The finding also showed that respondents with more than 10 years’ work experience agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.9.2). Majority of respondents (96%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 4 % of them are neutral about the statement. While about 91% of respondents with less than five years’ experience have either strongly agreed or agreed with statement and 9 % of them are neutral about the statement. No one strongly disagreed or disagreed with the statement.

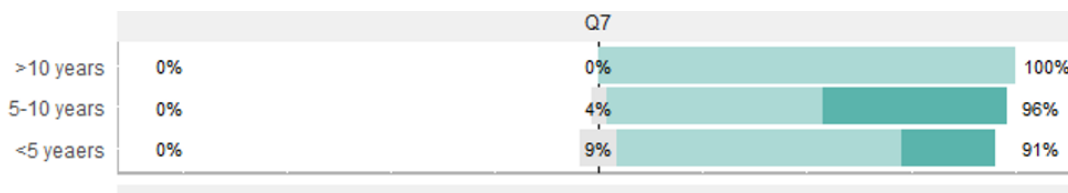


Figure 6.9.2: Respondents’ answers regarding risk responses using duration of employment

Furthermore. The finding also showed that all majority of respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement (Figure 6.9.3). Some 9% of respondents on middle position were neutral about statement, while majority (91%) of them either strongly agreed or agreed with statement.

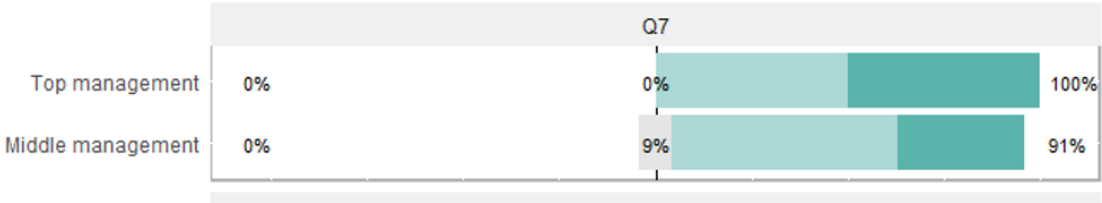


Figure 6.9.3: Respondents’ answers regarding risk responses using duration of employment

The finding shows that the majority of the respondents (>85%) either strongly agreed or agreed with the statement, thus the result show that this pillar is also present and functional.

6.6.6 Control activities

The research statement: The control activities in my hospital include actions to be implemented in addressing the risks faced by the organisation.

A total of 38,9% of the respondents strongly agreed with the statement “The control activities in my hospital include actions to be implemented in addressing the risks faced by the organisation”, while 51,9% of the respondents also agreed with it. Approximately 9,3% of the respondents were neutral and no respondents strongly disagreed or disagreed with the statement (Figure 6.10.0).

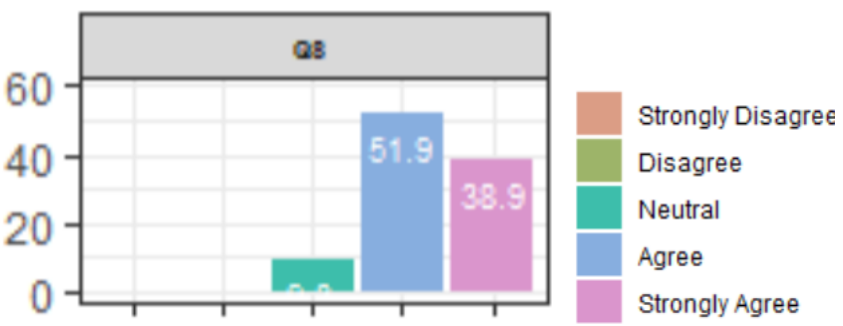


Figure 6.10.0: Respondents’ answers regarding control activities

The findings showed that all respondents with low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.10.1). Majority of respondents with high (83%) and (92%) moderate RM experience also either strongly agreed or agreed

with statement, while 17% of respondents with high RM experience and 8% of moderate RM experience were neutral about the statement.

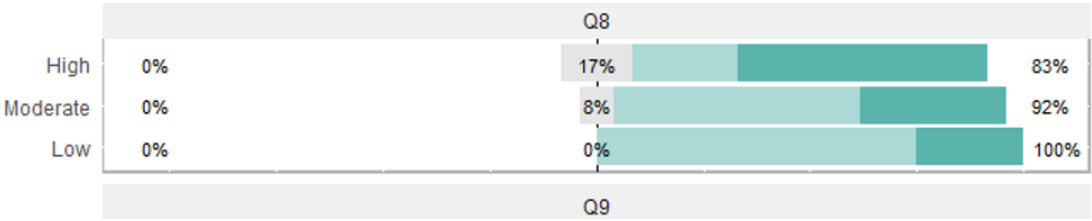


Figure 6.10.1: Respondents’ answers regarding control activities using different enterprise risk management experiences

The finding also showed that respondents with more than 10 years’ work experience agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.10.2). Majority of respondents (93%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 7 % of them are neutral about the statement. While about 91% of respondents with less than five years’ work experience have either strongly agreed or agreed with statement and 9 % of them are neutral about the statement. No one strongly disagreed or disagreed with the statement

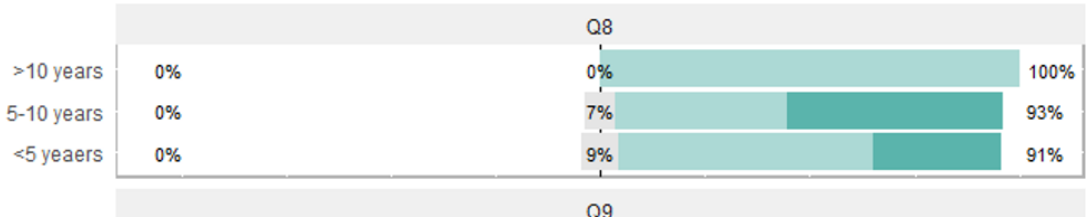


Figure 6.10.2: Respondents’ answers regarding control activities using duration of employment

Furthermore. The finding also showed that all majority of respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement (Figure 6.10.3). Some 11% of respondents on middle position were neutral about statement, while majority (89%) of them either strongly agreed or agreed with statement.

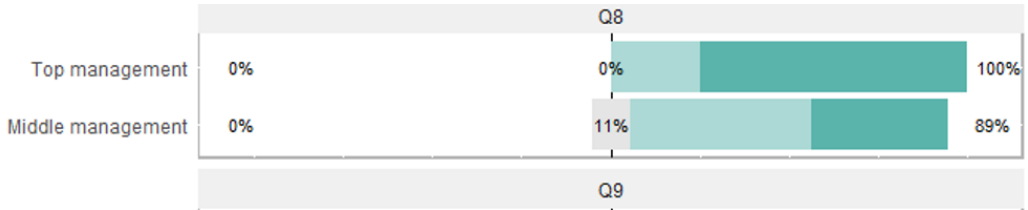


Figure 6.10.3: Respondents' answers regarding control activities using level of management

The finding shows that the majority of the respondents (>83%) either strongly agreed or agreed with the statement, thus result shows that this pillar is also present and functional.

6.6.7 Information and communication

The research statement: In my hospital, there is a process to enable employees to report risk events that may have occurred or have occurred in their area of responsibility.

The statement, "In my hospital, there is a process to enable employees to report risk events that may have occurred or have occurred in their area of responsibility," was strongly agreed upon by 35,2% of the respondents. That remark was likewise agreed with by 50% of the respondents. 14,8% of the respondents had no opinion. As seen in Figure 6.11.0, none of the respondents disagreed or disagreed strongly with the assertion.

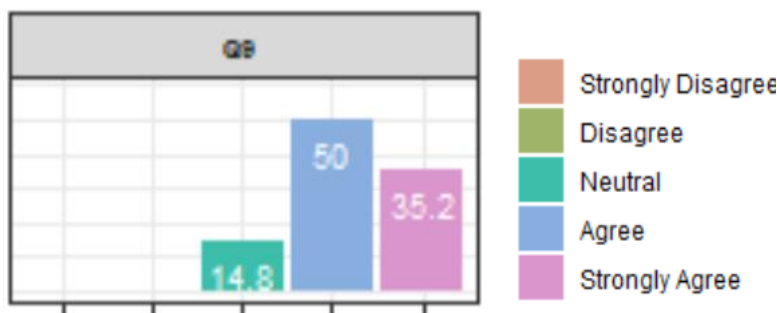


Figure 6.11.0: Respondents' answers regarding information and communication.

The findings showed that all respondents with low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.11.1). Majority of respondents with high (83%) and (84%) moderate RM experience also either strongly agreed or agreed with statement, while 17% of respondents with high RM experience and 16% of moderate RM experience were neutral about the statement.

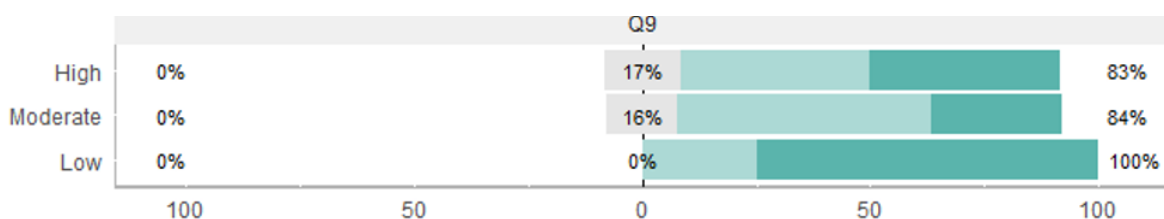


Figure 6.11.1: Respondents' answers regarding information and communication using different enterprise risk management experiences

The finding also showed that respondents with more than 10 years' work experience agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.11.2). Majority of respondents (85%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 15 % of them are neutral about the statement. While about 87% of respondents with less than five years' work experience have either strongly agreed or agreed with statement and 13 % of them are neutral about the statement. No one strongly disagreed or disagreed with the statement

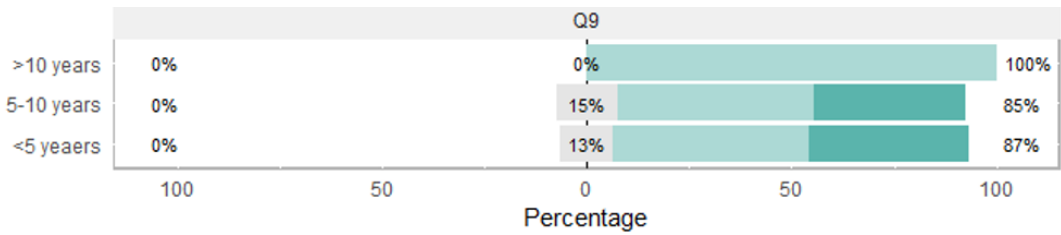


Figure 6.11.2 Respondents' answers regarding information and communication using duration of employment

Furthermore. The finding also showed that all majority of respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement (Figure 6.11.3). Some 15% of respondents on middle position were neutral about statement, while majority (85%) of them either strongly agreed or agreed with statement.

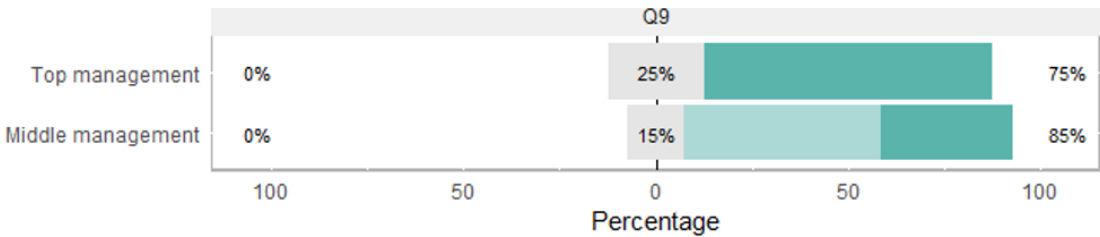


Figure 6.11.3: Respondents' answers regarding information and communication using level of management

This result shows that this pillar is also present and functional, but some highly experienced (17%) and top managers (25%) doubt its functionality

6.6.8 Monitoring

The research statement: Ongoing monitoring of all the risks activities is performed on a regular basis

A total of 20,4% of the respondents strongly agreed with the statement “Ongoing monitoring of all the risks activities is performed on a regular basis”, while 48,1% of the respondents also agreed with statement, while 5,6% of respondent disagreed with the statement, while 20,48% were neutral. No respondents strongly disagreed with the statement (Figure 6.12.0).

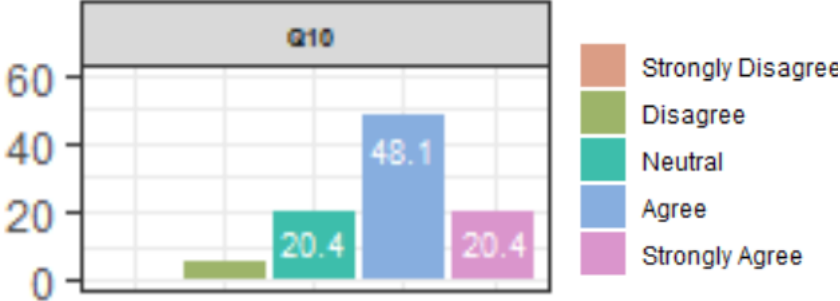


Figure 6.12.0: Respondents’ answers regarding monitoring.

The finding showed that respondents with high and low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.12.1). Majority of respondents (63%) with low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement, but about 33% of them are neutral about the statement. Majority of respondents (72%) with moderate RM experience either strongly agreed or agreed with the statement but about 19% of them are neutral about the statement while 19 % of them disagreed with the statement. Some 25% of respondents with high RM experience were also neutral about the statement but (75%) majority of them have either strongly agreed or agreed with statement

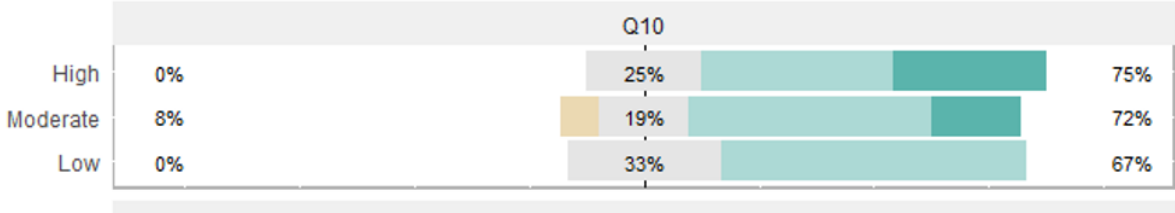


Figure 6.12.1: Respondents’ answers regarding monitoring using different enterprise risk management experiences

The finding also showed that (63%) majority of respondents with more than 10 years’ work experience agreed with statement and no one among them respondents strongly agreed or disagreed but about 33of them were neutral with the statement (Figure 6.12.2). Majority of respondents (76%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 16 % of them are neutral about the statement, while 8% of them disagreed with the statement. furthermore, about 73% of respondents with less than five years’ experience

have either strongly agreed or agreed with statement and 23 % of them are neutral about the statement. Other 5 % of respondents with less than five years’ experience disagreed with the statement.

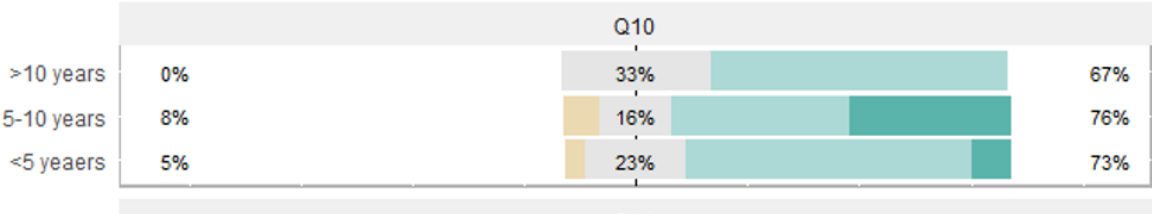


Figure 6.12.2: Respondents’ answers regarding monitoring using duration of employment

Additionally, the finding also showed that majority of respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement, but 25% of them were neutral about statement (Figure 6.12.3). Some 7% of respondents on middle position disagreed with the statement, while 23 of them were neutral about statement.70% of respondents on middle management positions either strongly agreed or agreed with statement.

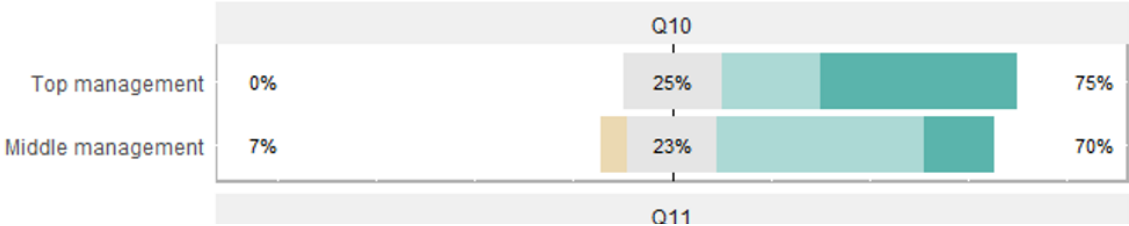


Figure 6.12.3: Respondents’ answers regarding monitoring using level of management

The results show that this pillar is presenting and functioning in the XYZ PHC facility, even some respondents (8%) who are in a middle management did not believe that this pillar is functional.

6.6.9. Summary of risk management element (processes):

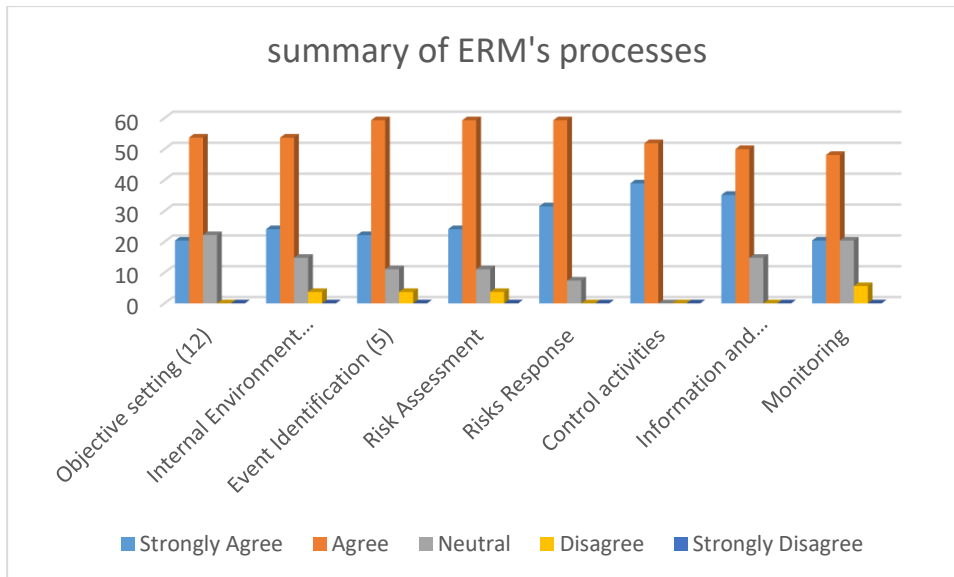


Figure 6.13: Summary of the processes of enterprise risk management

Figure 6.13. The finding shown in that eight pillars of ERM according to COSO ERM are present and functional in the XYZ PHC facility.

6.7 Critical success factors of effective enterprise risk management

These critical success factors have been identified by risk champions to have played a vital role in COVID-19 management implementation. The respondents' evaluation of the key success elements that affect the efficacy of the risk management procedure utilised in COVID-19 risk management at the XYZ PHC facility is given in this part.

6.7.1 Stakeholder involvement

The research statement: The hospital collaborated effectively with its stakeholders to manage the risk of COVID-19.

A total of 46,3% of the respondents strongly agreed that the hospital collaborated effectively with its stakeholders to manage the risk of COVID-19, as well as 33,3% of the respondents who also agreed with the statement. While approximately 16,7% of the respondents were neutral. No respondents strongly disagreed or disagreed with the statement (Figure 6.14.0).

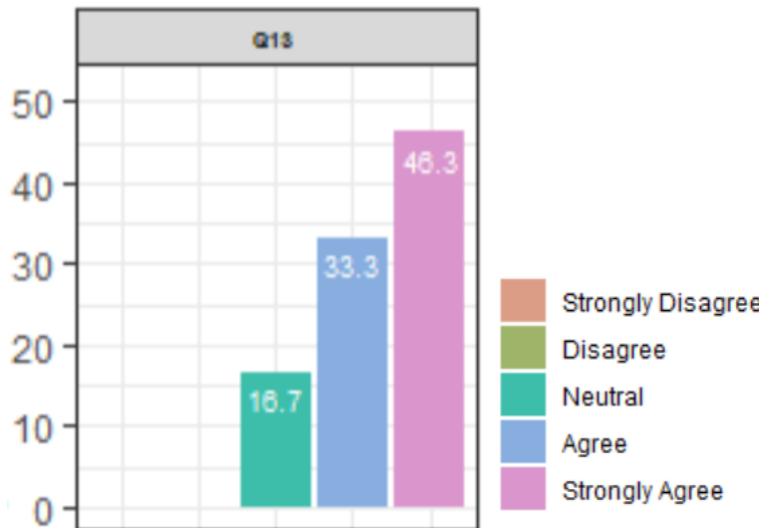


Figure 6.14.0: Respondents' answers regarding stakeholder involvement.

The findings showed that all respondents with low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.14.1). Majority of respondents with high (92%) and (78%) moderate RM experience also either strongly agreed or agreed with statement, while 8% of respondents with high RM experience and 22% of moderate RM experience were neutral about the statement.

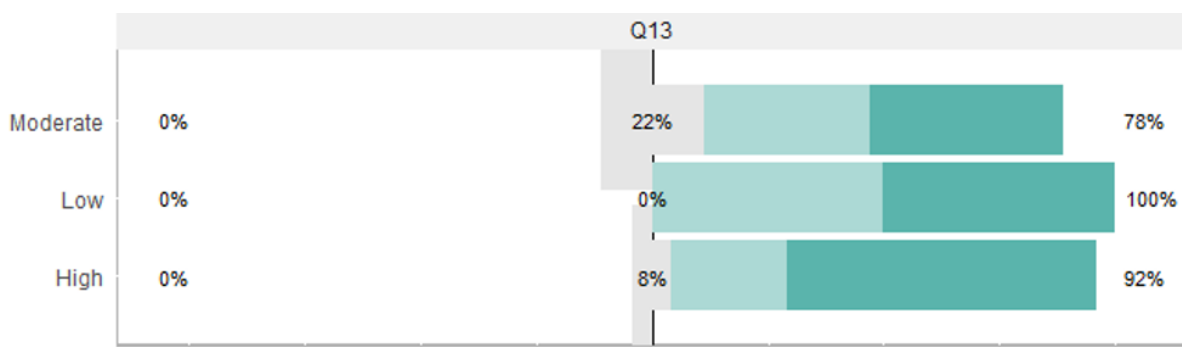


Figure 6.14.1: Respondents' answers regarding stakeholder involvement using different enterprise risk management experiences

The finding also showed that respondents of different work experiences either agreed with statement or were neutral about it. 67% of respondents with more than 10 years' work experience agreed with statement and 33 of them were neutral about the statement (Figure 6.14.2). Majority of respondents (84%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 16 % of them are neutral about the

statement. about 87% of respondents with less than five years' work experience have either strongly agreed or agreed with statement and 13 % of them are neutral about the statement.

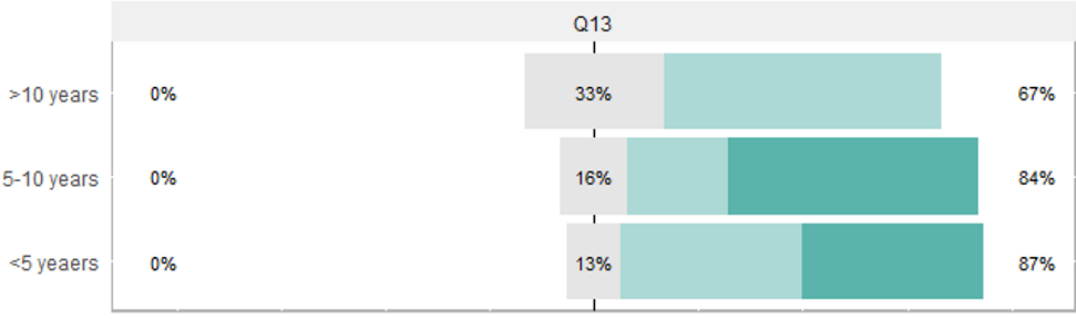


Figure 6.14.2: Respondents' answers regarding stakeholder involvement using duration of employment

Additionally, the findings also showed that all majority of respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement or was neutral with the statement (Figure 6.14.3). 18 % of respondents on middle positions were neutral about statement but majority (82%) of them either strongly agreed or agreed with statement.

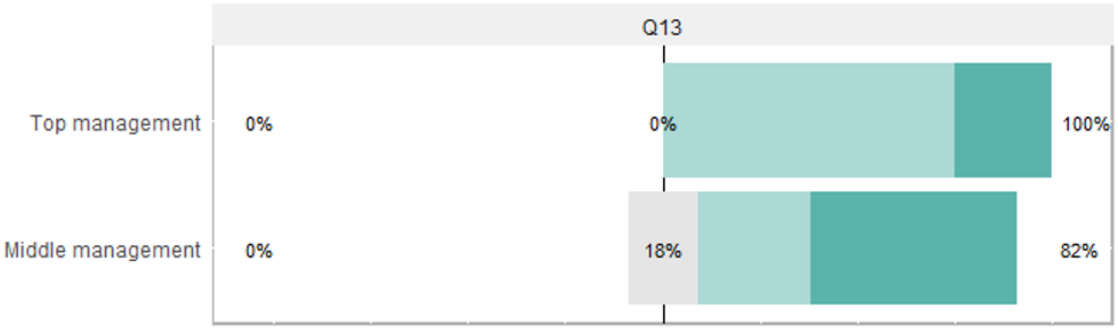


Figure 6.14.3: Respondents' answers regarding stakeholder involvement using level of management

This result shows that this pillar is also present and functional and it affirms that the XYZ PHC facility collaborated well with different stakeholders.

6.7.2 Communication

The research statement: The communication strategy was clear and effective in support of COVID-19 risk management in the hospital

A total of 46,3% of the respondents strongly agrees the communication strategy was clear and effective in support of COVID-19 risk management in the hospital, while 44,4% of the respondents also agreed with statement. Remarkably 5,6% of the respondent were neutral, while respondents (1,9%) disagreed with statement. No respondents strongly disagreed with the statement (Figure 6.15.0).

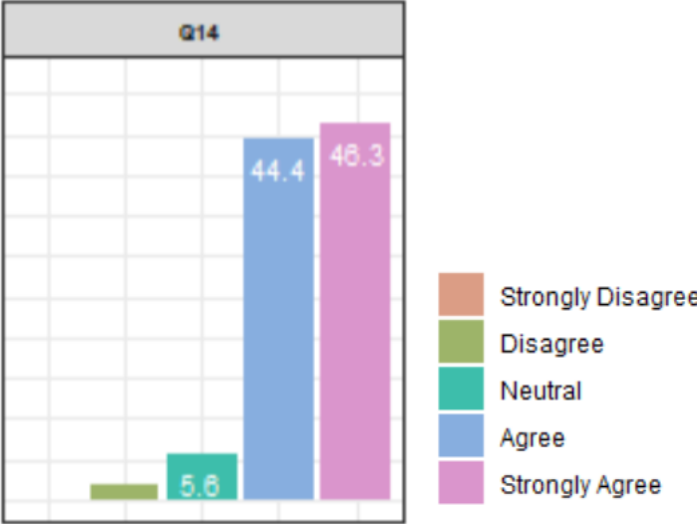


Figure 6.15.0: Respondents’ answers regarding communication.

The findings showed that all respondents with low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.15.1). Majority of respondents with high (92%) and (92%) moderate RM experience also either strongly agreed or agreed with statement, while 8% of respondents with high RM experience and 5% of moderate RM experience were neutral about the statement. About 5% of respondents with moderate RM experience disagreed with the statement.

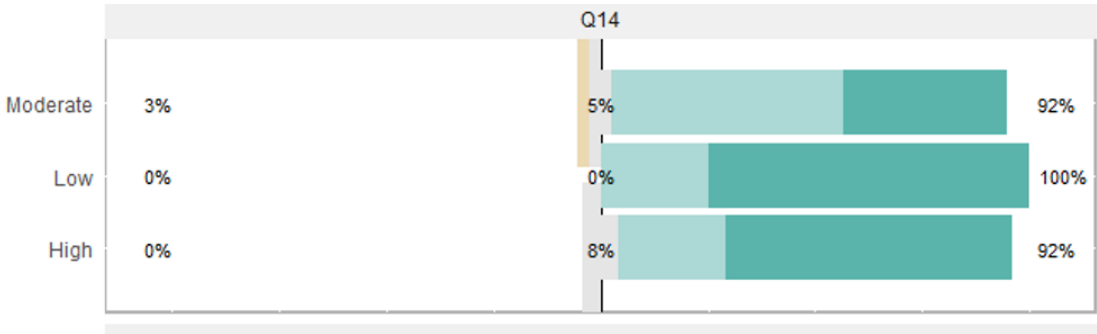


Figure 6.15.1: Respondents’ answers regarding communication using different enterprise risk management experiences

The finding also showed that respondents with more than 10 years’ work experience agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.15.2). Majority

of respondents (92%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 8 % of them are neutral about the statement. While about 96% of respondents with less than five years' experience have either strongly agreed or agreed with statement and 4 % of them are neutral about the statement. No one strongly disagreed or disagreed with the statement.

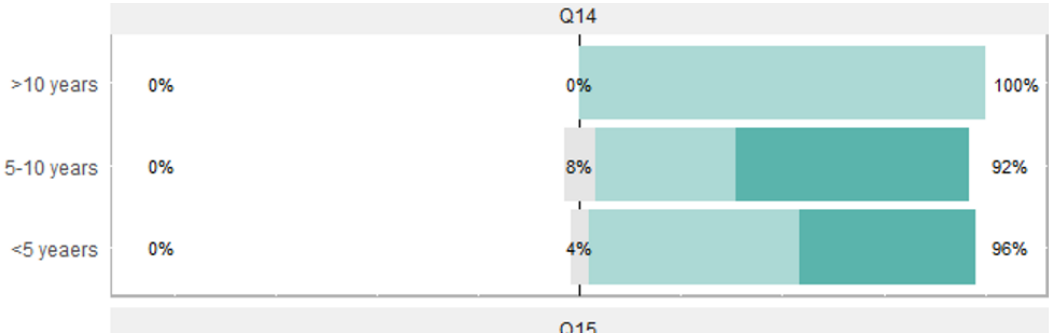


Figure 6.15.2: Respondents' answers regarding communication using duration of employment

Additionally, the findings also showed that all respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement or was neutral with the statement (Figure 6.15.3). 7 % of respondents on middle positions were neutral about statement and 2 % of them disagreed with the statement, but majority (91%) of them either strongly agreed or agreed with statement.

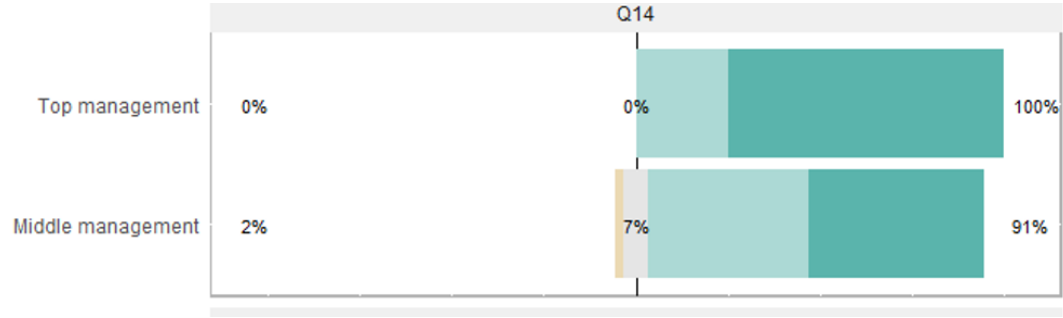


Figure 6.15.3: Respondents' answers regarding communication using level of management

This result show that this pillar is also present and functional, and show that the majority of the respondents agreed that communication was clear and effective with a few respondents (2%) disagreeing, but no one strongly disagreeing to this statement.

6.7.3 Resources

The research statement: The hospital made resources available for risk management during COVID -19

Half of the respondents (50%) strongly agreed that the hospital made resources available for risk management during COVID-19 with a further 40,7% also agreeing with statement. Some of the respondents (5,6%) were neutral, while no respondents strongly disagreed or disagreed with statement (Figure 6.16.0).

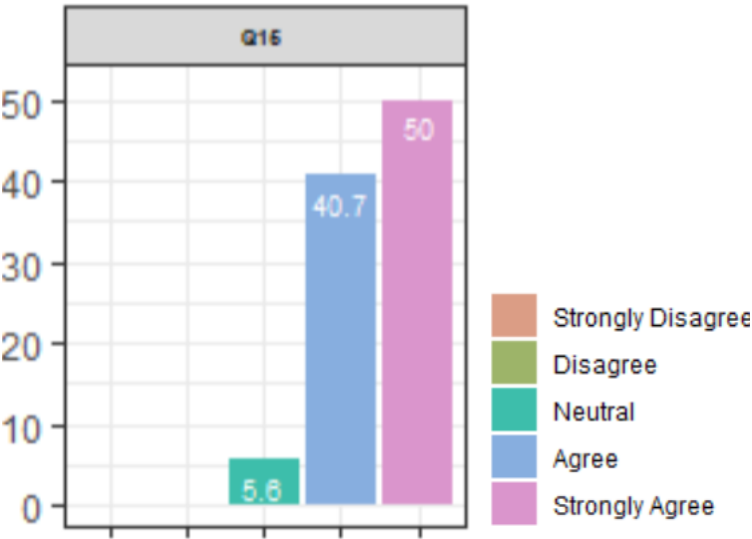


Figure 6.16.1: Respondents’ answers regarding resources.

The finding showed that all respondents with high and low RM experience have either strongly agreed or agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.16.1). Majority of respondents (92%) respondents with moderate RM experience either strongly agreed or agreed with the statement, only 8% of them were neutral about the statement.

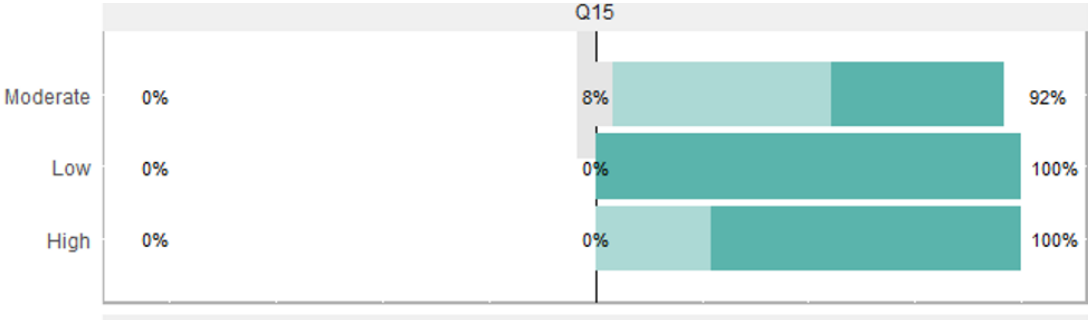


Figure 6.16.1: Respondents’ answers regarding resources using different enterprise risk management experiences

The finding showed that all respondents with more than 10 years’ work experience agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.16.2). It also showed that respondents with less than five years’ work experience either strongly agreed or agreed with statement as well. Majority of respondents (88%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 12% of them are neutral about the statement.

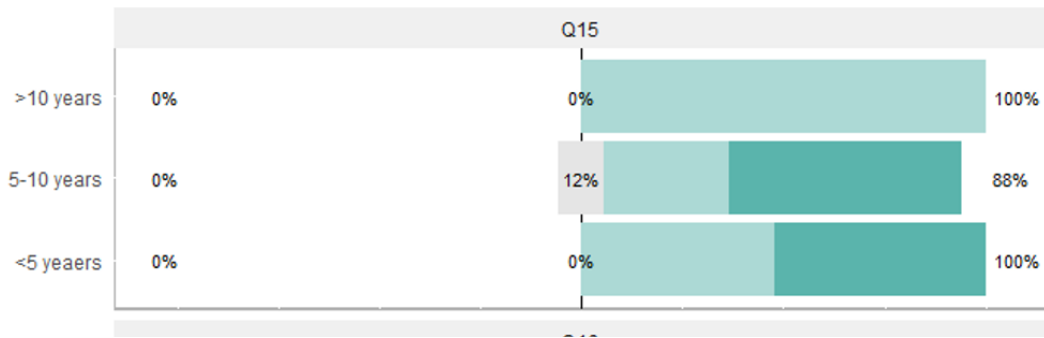


Figure 6.16.2: Respondents' answers regarding resources using duration of employment

Additionally, the findings also showed that all respondents on top positions either strongly agreed or agreed with statement and no one strongly disagreed or disagreed with the statement or was neutral with the statement (Figure 6.16.3). 7 % of respondents on middle positions were neutral about statement and majority (93%) of them either strongly agreed or agreed with statement.

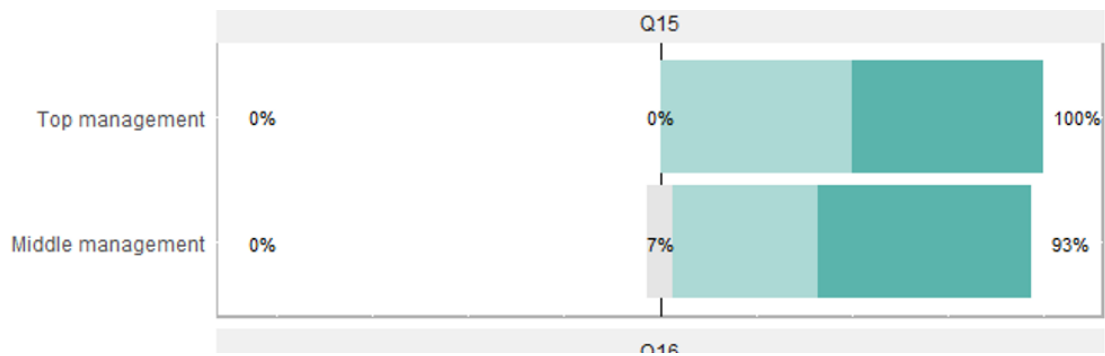


Figure 6.16.3: Respondents' answers regarding resources using level of management

This result shows that this pillar is also present and functional and shows that resources availability is a factor essential factor for effective ERM implementation.

6.7.4 Training

The research statement: Regular trainings helped the organisation to keep up to date with changes and information during the COVID-19 pandemic

More than half of the respondents (51,9%) strongly agreed that regular training helped the organisation to keep up to date with changes and information during the COVID-19 pandemic, with far more than 33,3% of the respondents

agreeing with statement. Approximately 9,35% of the respondents were neutral and some respondents (3,7%) disagreed with the statement. No respondent strongly disagreed with the statement (Figure 6.17.0).

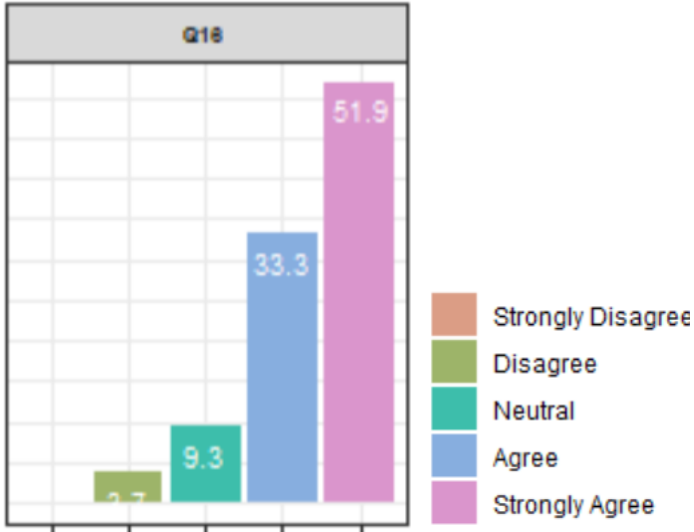


Figure 6.17.0: Respondents’ answers regarding training.

The finding showed that all respondents with low RM experience have either strongly agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.17.1). Majority of respondents (84%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and only 5 % of them disagreed with the statement, while 11 % were neutral about the statement. Vast majority of respondents (92%) with high RM experience have either strongly agreed with statement and some 8 % of them were neutral about the statement.

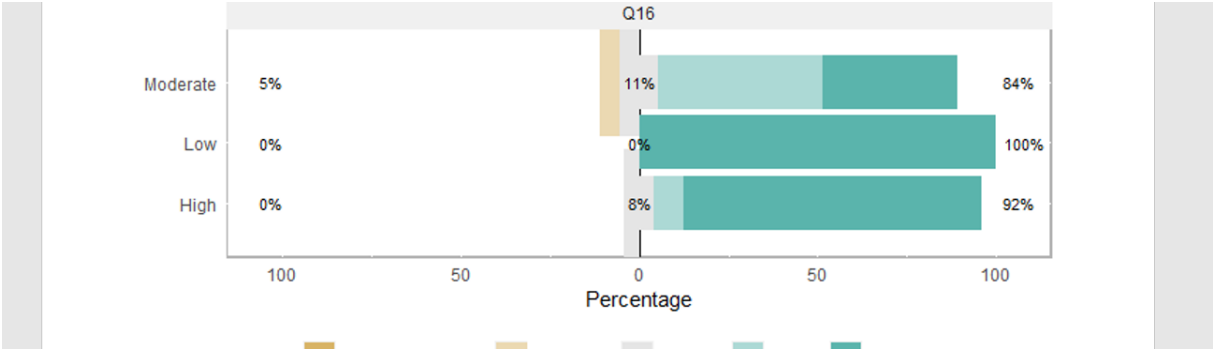


Figure 6.17.1: Respondents’ answers regarding training using different enterprises risk management experiences

The finding also showed that (67%) majority of respondents with more than 10 years’ work experience either strongly agreed or agreed with statement and no one among them strongly agreed or disagreed with the statement (Figure 6.17.2). Majority of respondents (85%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 12% of them are neutral about the statement. While about 96% of respondents with less than five years’ experience have either strongly agreed or agreed with statement and 4 % of them are neutral about the statement. About 4 % of respondents with between 5- 10 years’ work experience disagreed with

the statement, while 33% of respondents with more than 10 years' work experience were neutral about the statement.

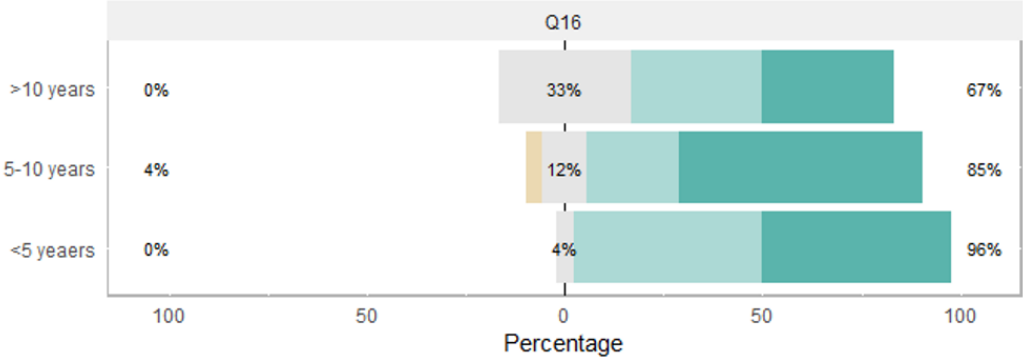


Figure 6.17.2: Respondents' answers regarding training using duration of employment

The finding showed that majority of respondents on top positions either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed with the statement, but some 25 % of them were neutral about the statement (Figure 6.17.3). About 9% of respondents on middle positions were neutral about statement and father, 4% disagreed with the statement.

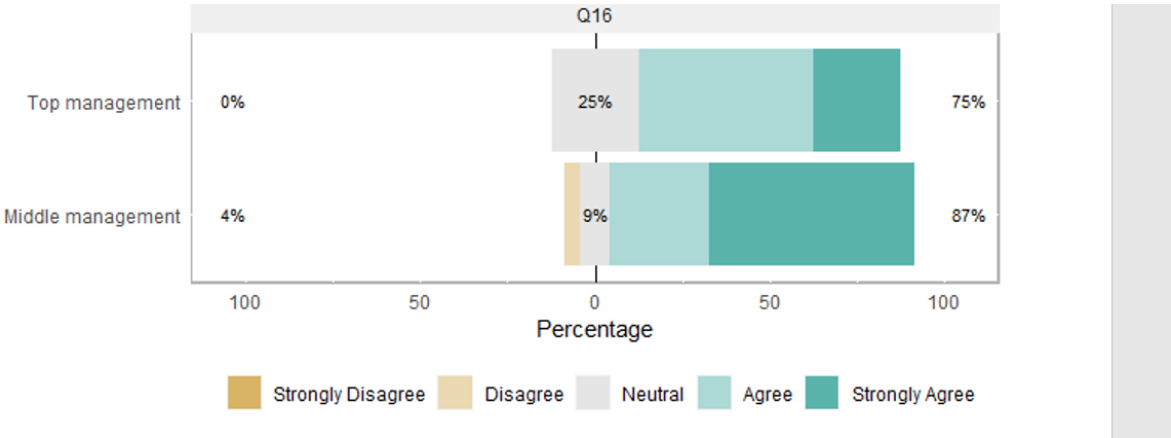


Figure 6.17.3: Respondents' answers regarding training using level of management

This result shows that this pillar is also present and functional, and shows that regular training played a vital role during the COVID-19 pandemic.

6.7.5. Summary of critical success factors

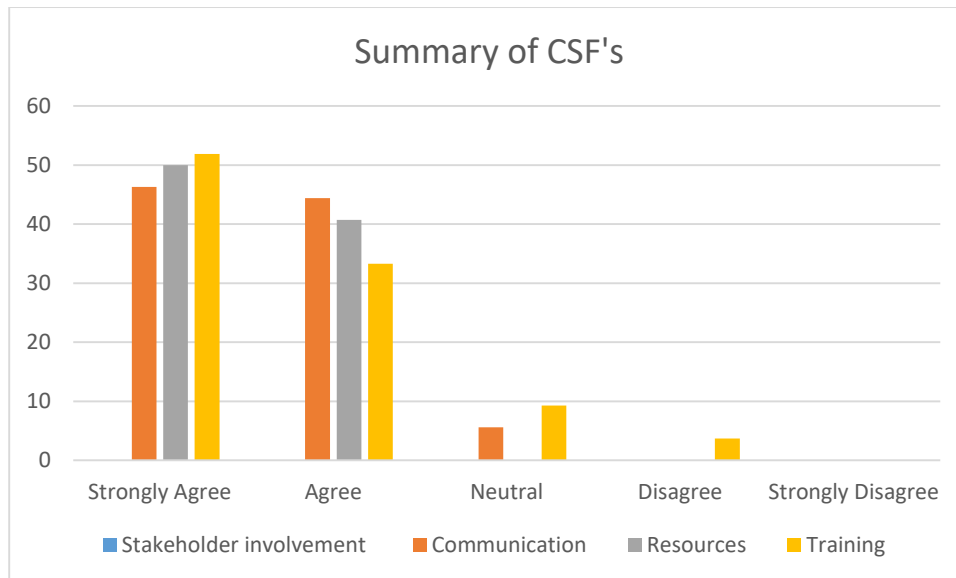


Figure 6.18: Summary of critical success factors

Figure 6.18: The finding shows that all the respondents agreed with risk champions that these critical success factors played a vital role during the COVID-19 pandemic to ensure effective RM processes are carried out.

6.8 Impact of the COVID-19 risk management strategy on performance

This section gives the respondents' general assessment of the impact of COVID-19 pandemic on the XYZ PHC facility's performances or outcomes.

6.8.1 Impact on XYZ PHC facility's performances

The research statement: The COVID- 19 risk management strategy had a positive impact on the organisation's performances.

A total of 51,9% of the respondents agreed with the statement that the COVID-19 risk management strategy had a positive impact on the organisation's performances, while 35,2% of the respondents also strongly agreed. Approximately 7,4% are neutral and no respondent disagreed or strongly disagreed with the statement showing that the respondents believe that COVID-19 management impacted the facility positively (Figure 6.19.0).

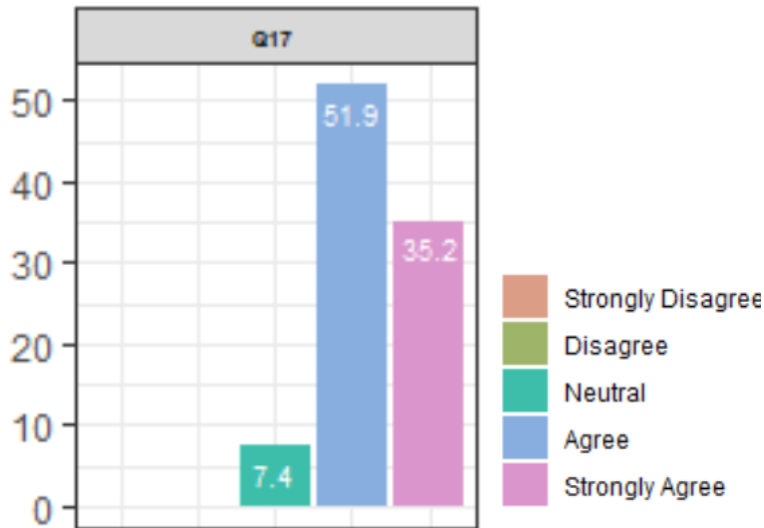


Figure 6.19.1: Respondents' answers regarding facility performances.

The finding showed that all respondents with high RM experience have either strongly agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.19.1). Majority of respondents (92%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and only 8% were neutral about the statement. Majority of respondents (75%) with low RM experience have either strongly agreed with statement and about 25 % of them were neutral about the statement

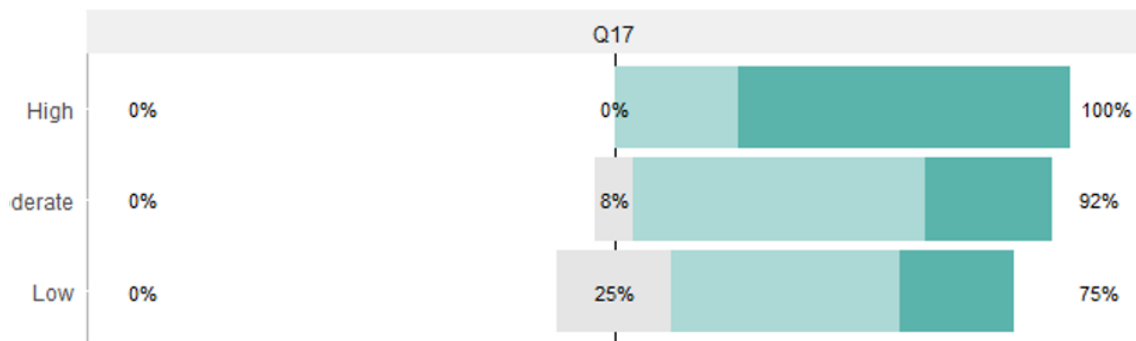


Figure 6.19.1: Respondents' answers regarding facility performances using different enterprise risk management experiences

The finding showed that all respondents with more than 10 years' work experience agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.19.2). It also showed that 96% of respondents with less than five years' work experience either strongly agreed or agreed with statement as well. Majority of respondents (88%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 12% of them are neutral about the statement. No one strongly disagreed or disagreed with the statement, but 4% respondents with more than 10 years' work experience were neutral about the statement.

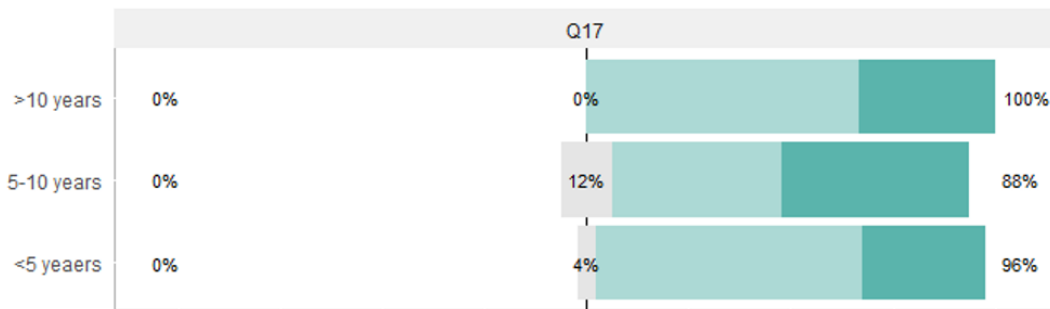


Figure 6.19.2: Respondents' answers regarding facility performances using the duration of employment

The finding showed that majority of respondents on top positions either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed with the statement or were neutral about the statement (Figure 6.19.3). About 9% of respondents on middle positions were neutral about statement and (91%) vast majority of these respondents either strongly agreed or agreed with statement.

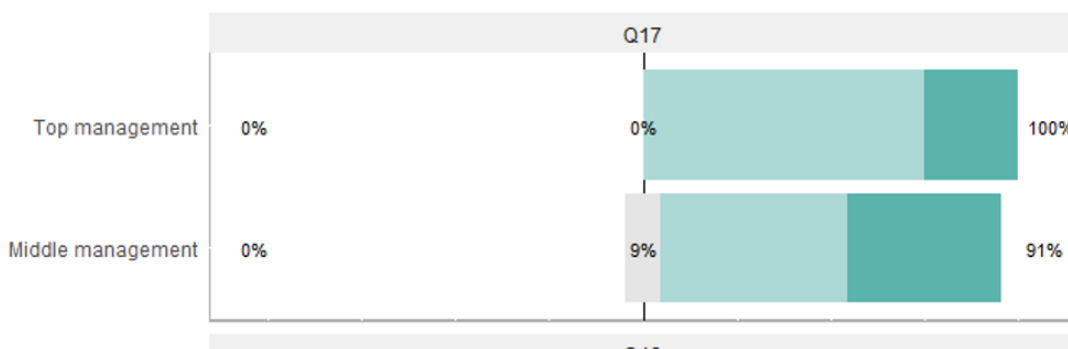


Figure 6.19.3: Respondents' answers regarding facility performances using the level of management

The results show that all the different respondents with a range of knowledge and experience believe that a COVID-19 risk management strategy had a positive impact on the organisation's performances.

6.9 Evaluation of the effectiveness of enterprise risk management

The Department of Health, Free State Province, reviews its ERM effectiveness on quarterly basis using risk management benchmarks to against set facility strategic outcomes. Risk champions reported that the XYZ PHC facility Department of Health used efficiency indicators to monitor facility performance on weekly and monthly basis and risk management bench mark on quarterly basis to review facility's COVID-19 risk management plan progress. Therefore, this section will confirm if in deed the XYZ PHC facility used both efficiency and risk criteria to assess the effectiveness of COVID-19 risk management plan.

6.9.1 Efficiency indicators

The research statement: The effectiveness of COVID-19 risk management was evaluated using hospital targets (efficiency indicators)

A total of 29,6% of the respondents strongly agreed that the effectiveness of COVID-19 risk management was evaluated using hospital targets (efficiency indicators), 50% agrees with the statement, while 16,7% of the respondents were neutral. Approximately 1,9% of the respondents disagreed No respondent strongly disagreed with the statement (Figure 6.20.0).

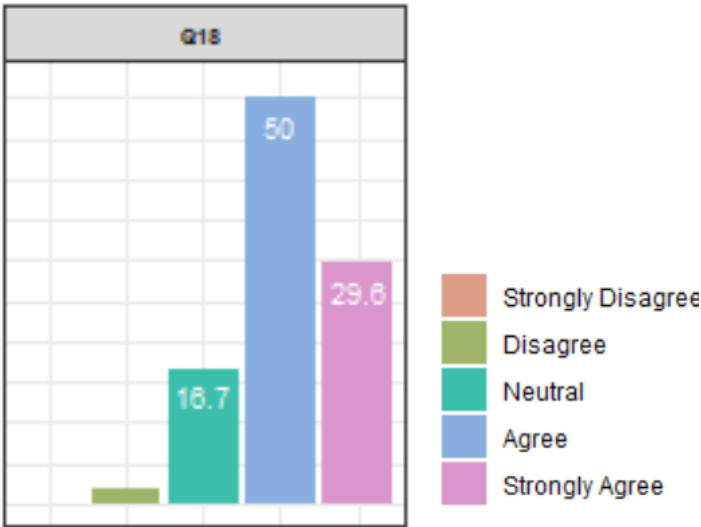


Figure 6.20.0: Respondents’ answers regarding efficiency indicators

The finding showed that all respondents with low RM experience have either strongly agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.20.1). Majority of respondents (78%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and some 19% were neutral about the statement. Majority of respondents (83%) with high RM experience have either strongly agreed with statement and about 17 % of them were neutral about the statement. About 3% of respondents with moderate RM experience disagreed with the statement

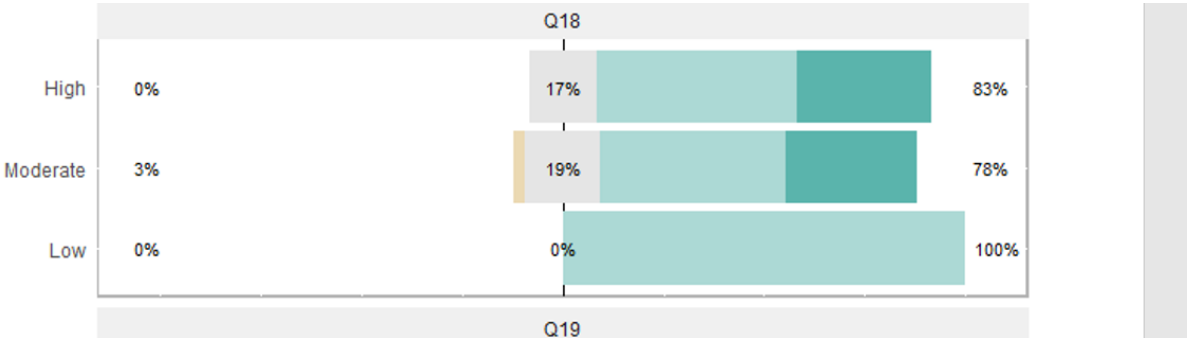


Figure 6.20.1: Respondents' answers regarding efficiency indicators using different enterprise risk management experiences

The finding showed that majority of respondents (91%) with less than 5 years' work experience agreed with statement and no one among them respondents strongly agreed or disagreed (Figure 6.20.2). It also showed that 67 % of respondents with high than 10 years' work experience were neutral about the statement and also about 33% of them agreed with statement. Majority of respondents (77%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 19% of them are neutral about the statement. about 4 % of respondents with between 5- 10 years' work experience disagreed with the statement.

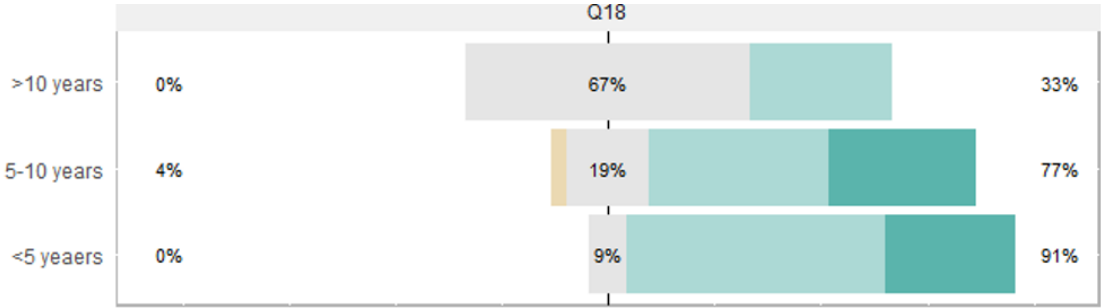


Figure 6.20.2: Respondents' answers regarding efficiency indicators using duration of employment

The finding showed that majority of respondents on top positions either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed, but about 25% of them were neutral about the statement (Figure 6.20.3). About 17% of respondents on middle positions were neutral about statement and (80%) vast majority of these respondents either strongly agreed or agreed with statement. Some 2% of respondents on middle positions disagreed with the statement.

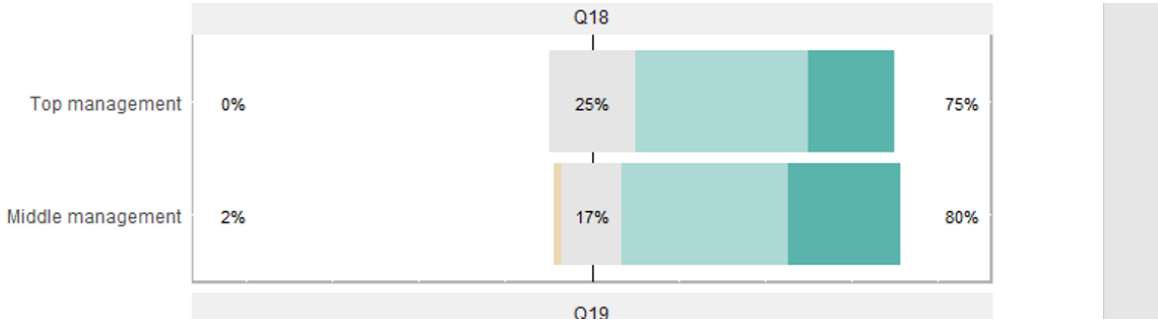


Figure 6.20.3: Respondents' answers regarding efficiency indicators using level of management

This result shows that this pillar is also present and functional, and confirms that efficiency indicators are used to assess the effectiveness of COVID-19 risk management.

6.9.2 Enterprise risk management benchmarks

The research statement: The effectiveness of the COVID-19 risk management was evaluated using risk management benchmarks

A total of 31,5% of the respondents strongly agreed that the effectiveness of the COVID-19 risk management was evaluated using risk management benchmarks, while a remarkable 51,9% of the respondents agreed with the statement. Approximately 13% of the respondents were neutral, while a few respondents (1,9%) disagreed with the statement and no one strongly disagreed with the statement (Figure 6.21.0).

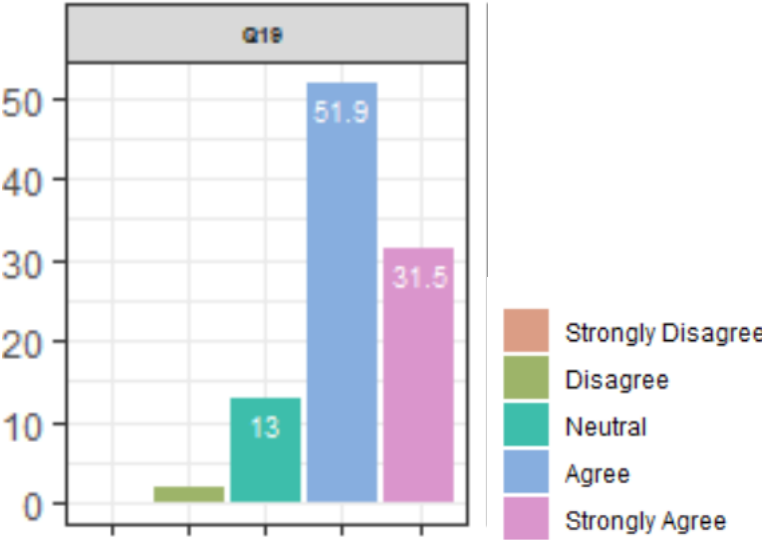


Figure 6.21.0: Respondents' answers regarding enterprise risk management benchmarks.

The finding showed that all respondents with low RM experience have agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.21.1). Majority of respondents (84%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and some 14% were neutral about the statement. Majority of respondents (83%) with high RM experience have either strongly agreed or agreed with statement and about 17 % of them were neutral about the statement. About 3% of respondents with moderate RM experience disagreed with the statement.

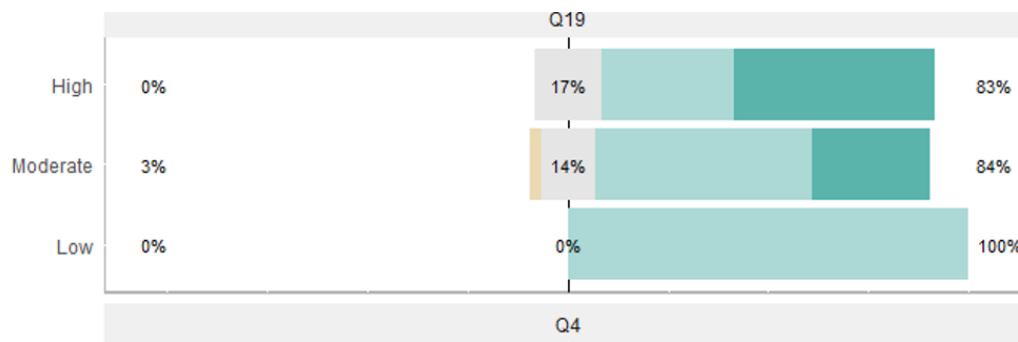


Figure 6.21.1: Respondents' answers regarding enterprise risk management benchmarks using different enterprise risk management experiences

The finding showed that majority of respondents (91%) with less than 5 years' work experience agreed with statement and no one among them respondents strongly agreed or disagreed (Figure 6.21.2). It also showed that 67 % of respondents with high than 10 years' work experience were neutral about the statement and also about 33% of them agreed with statement. Majority of respondents (81%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 15% of them are neutral about the statement. about 4 % of respondents with between 5- 10 years' work experience disagreed with the statement.

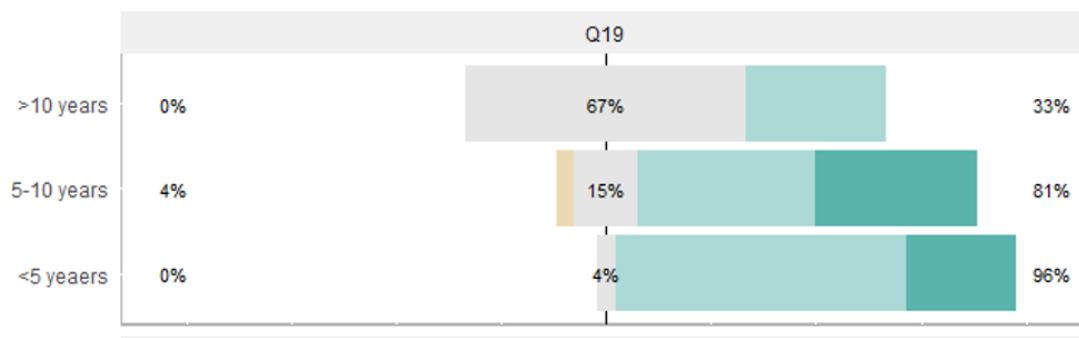


Figure 6.21.2: Respondents' answers regarding enterprise risk management benchmarks using duration of employment

The finding showed that majority of respondents (75%) on top positions either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed, but about 25% of them were neutral about the statement (Figure 6.21.3). About 17% of respondents on middle positions were neutral about statement and (85%) vast majority of these respondents either strongly agreed or agreed with statement. Some 2% of respondents on middle positions disagreed with the statement.

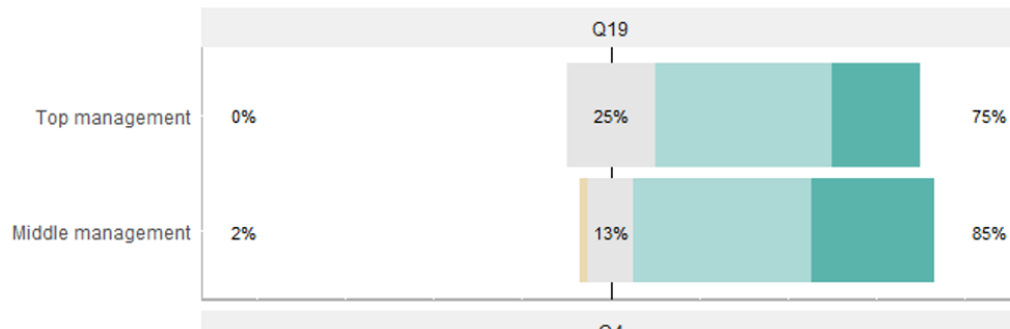


Figure 6.21.3: Respondents' answers regarding enterprise risk management benchmarks using level of management

This result shows that this pillar is also present and functional and confirms that risk management benchmark was used to assess the effectiveness of COVID-19 risk management.

6.9.3. Summary of the results:

The table showing the results between the two indicators:

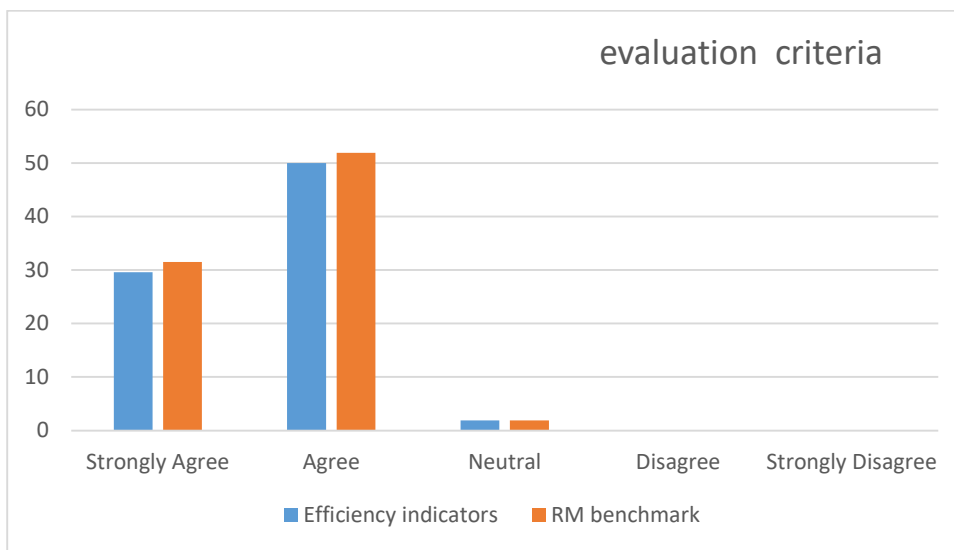


Figure 6.22: Summary of evaluation criteria used to assess the effectiveness of enterprise risk management

Figure 6.22: The above shows that the majority of the respondents answered that efficient indicators and a risk management benchmark were used to assess and monitor the effectiveness of the COVID-19 risk management plan in the XYZ PHC facility.

6.10 Identified themes for the qualitative research (best practices)

The section assesses the identified themes for the qualitative research regarding research question on the large population of the XYZ PHC facility and check if there is agreement of the lessons that will prepare the facility for the future.

6.10.1 Quality improvement plan

The research statement: The hospital is using quality improvement plans to strengthened risk management processes.

A total of 51,9% of the respondents strongly agreed that the hospital is using quality improvement plans to strengthen risk management processes, while approximately 40,1% also agreed with the statement. Furthermore, approximately 7,4% of the respondents were neutral, with no respondents strongly disagreeing or disagreeing with the statement. The results show that the respondents support the XYZ PHC facility using quality plans to improve ERM processes (Figure 6.23.0).

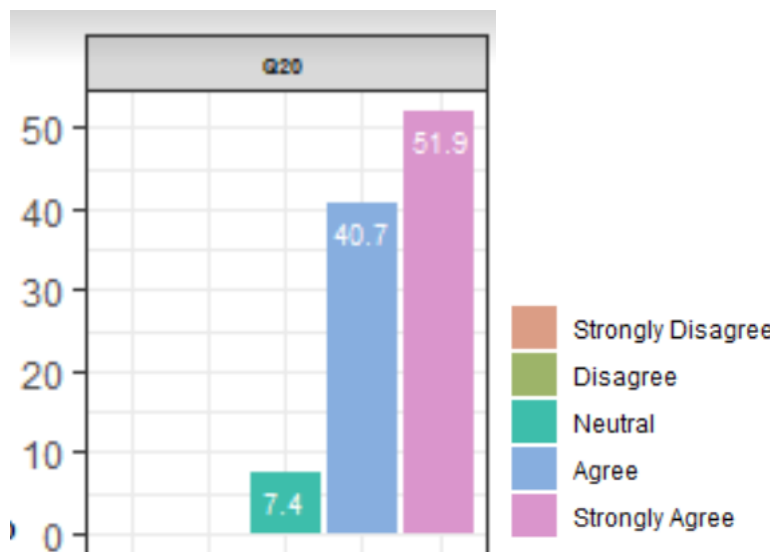


Figure 6.23.0: Respondents' answers regarding QIP.

The finding showed that respondents of RM experience have either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed with the statement but some were neutral on some statements. (Figure 6.23.1). Majority of respondents (95%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and some 5% were neutral about the statement. While majority of respondents (92%) with high RM experience have either strongly agreed or agreed with statement and about 8% of them were neutral about the statement. Additionally, Majority of respondents (75%) respondents with low RM experience either strongly agreed or agreed with the statement, and some 25% of them were neutral about the statement

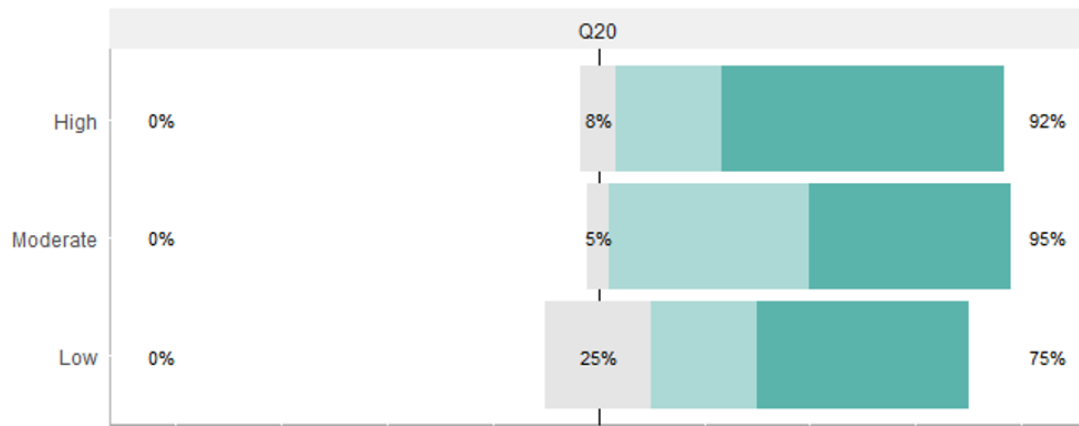


Figure 6.24.1: Respondents' answers regarding QIP using different enterprise risk management experiences

The finding also showed that respondents with more than 10 years' work experience agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.23.2). Majority of respondents (89%) with between 5- 10 years' work experience have either strongly agreed or agreed with statement and 11 % of them are neutral about the statement. While about 96% of respondents with less than five years' experience have either strongly agreed or agreed with statement and 4 % of them are neutral about the statement. No one strongly disagreed or disagreed with the statement.

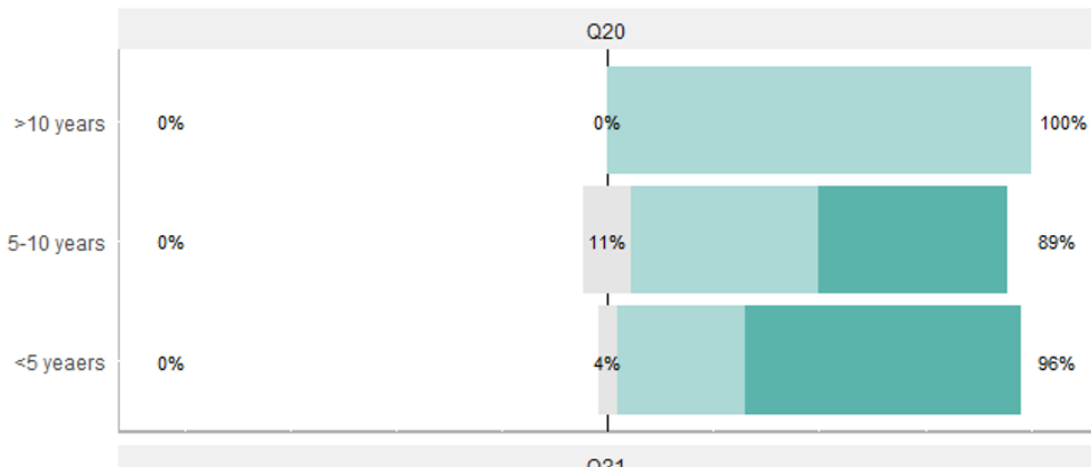


Figure 6.23.2: Respondents' answers regarding quality improvement plan using duration of employment

Additionally, the findings also showed that all respondents on top positions agreed with statement and no one strongly disagreed or disagreed with the statement or was neutral with the statement (Figure 6.23.3). 9 % of respondents on middle positions were neutral about statement and majority (91%) of them either strongly agreed or agreed with statement.

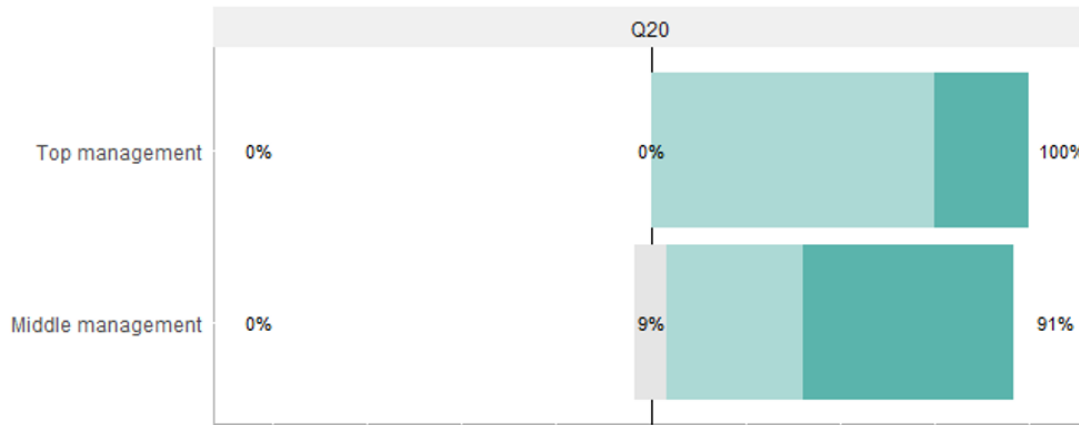


Figure 6.23.3: Respondents' answers regarding quality improvement plan using level of management

The results show that different respondents with a range of knowledge and experience believe that the XYZ PHC facility is using quality plans to improve risk management processes.

6.10.2 Information and communication technology

The research statement: The hospital is integrating Information and Communication Technologies in risk management practices.

A total of 24,1% of the respondents strongly agreed that the hospital is integrating ICTs in risk management practices, with half of the respondents (51,9%) agreeing with the statement. Approximately 1,9% disagreed with statement, while 22,2% were neutral. No respondents strongly disagreed (Figure 6.24.0).

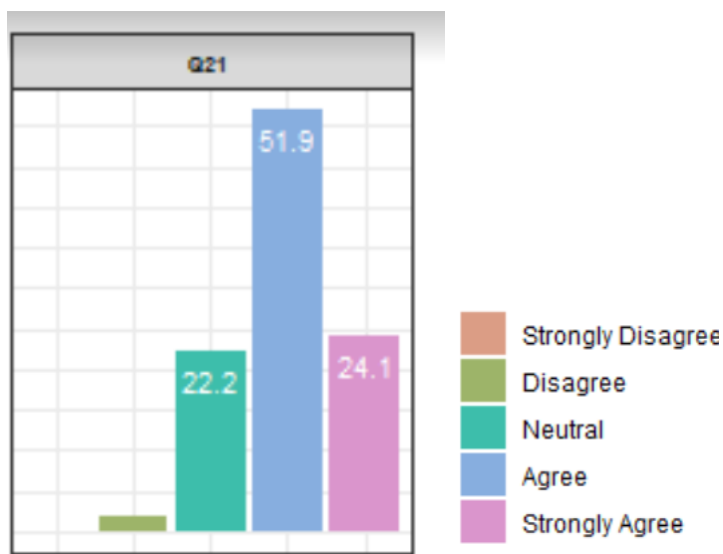


Figure 6.24.0: Respondents' answers regarding information communication and technology.

The finding showed that all respondents with low RM experience have either strongly agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.24.1). Majority of respondents (71%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and some 26% were neutral about the statement. Majority of respondents (83%) with high RM experience have either strongly agreed with statement and about 17 % of them were neutral about the statement. About 3% of respondents with moderate RM experience disagreed with the statement

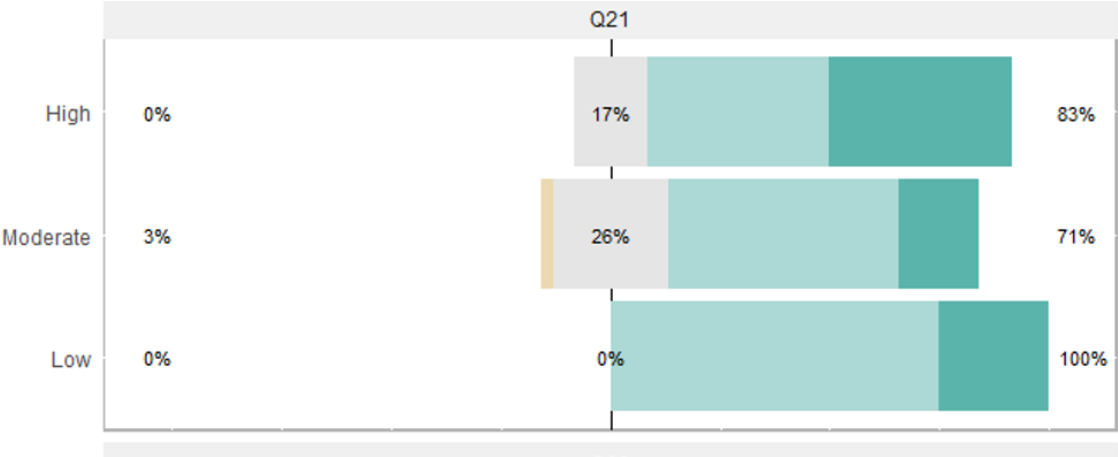


Figure 6.24.1: Respondents’ answers regarding information communication and technology using different enterprise risk management experiences

The finding showed that majority of respondents (70%) with less than 5 years’ work experience agreed with statement and no one among them respondents strongly agreed or disagreed (Figure 6.24.2). It also showed that 67 % of respondents with high than 10 years’ work experience were neutral about the statement and also about 33% of them agreed with statement. Majority of respondents (89%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 11% of them are neutral about the statement. about 4 % of respondents with less than 5 years’ work experience disagreed with the statement and 26 of them were neutral about the statement.

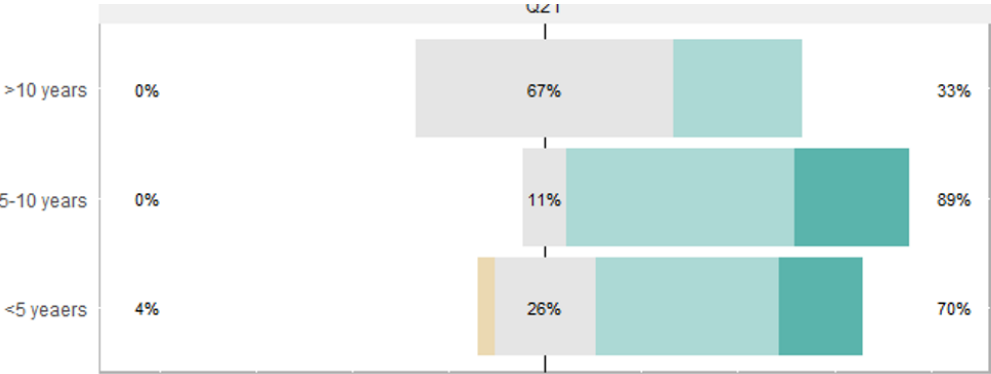


Figure 6.24.2: Respondents' answers regarding information communication and technology using duration of employment

The finding showed that majority of respondents (75%) on top positions agreed with statement and no one among them strongly disagreed or disagreed, but about 25% of them were neutral about the statement (Figure 6.24.3). About 21% of respondents on middle positions were neutral about statement and (77%) majority of these respondents either strongly agreed or agreed with statement. Some 2% of respondents on middle positions disagreed with the statement.

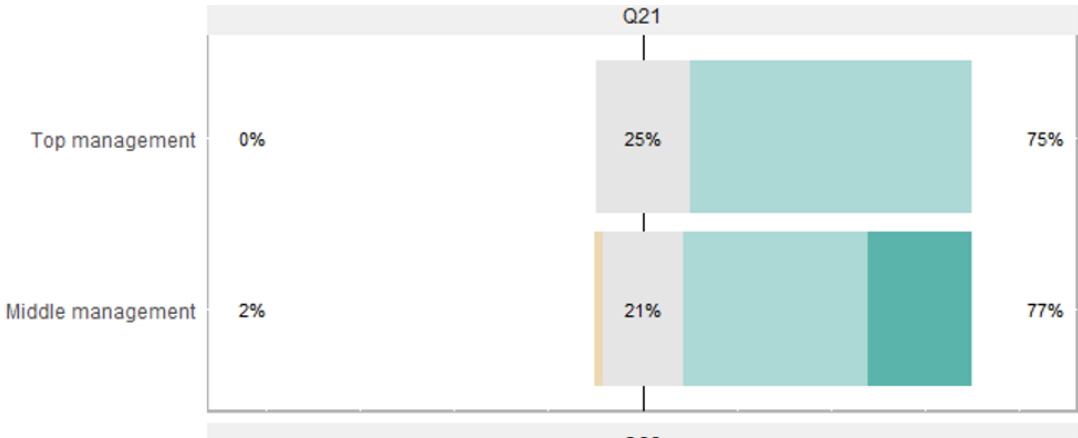


Figure 6.24.3: Respondents' answers regarding information communication and technology using level of management

This result shows that the majority of the respondents answered positively and, therefore, the hospital is integrating ICT in risk management in the XYZ PHC facility well.

6.10.3 Cascading downwards

The research statement: The hospital is committed to cascading risk management to lower levels.

A total of 22,2% of the respondents strongly agreed that the hospital is committed to cascading risk management to lower levels, with half of the respondents (50%) also agreeing that the hospital is cascading RM downwards. Approximately 5,6% of the respondents disagreed with the statement, while 22,2% of the respondents were neutral. No respondents strongly disagreed (Figure 6.25.0).

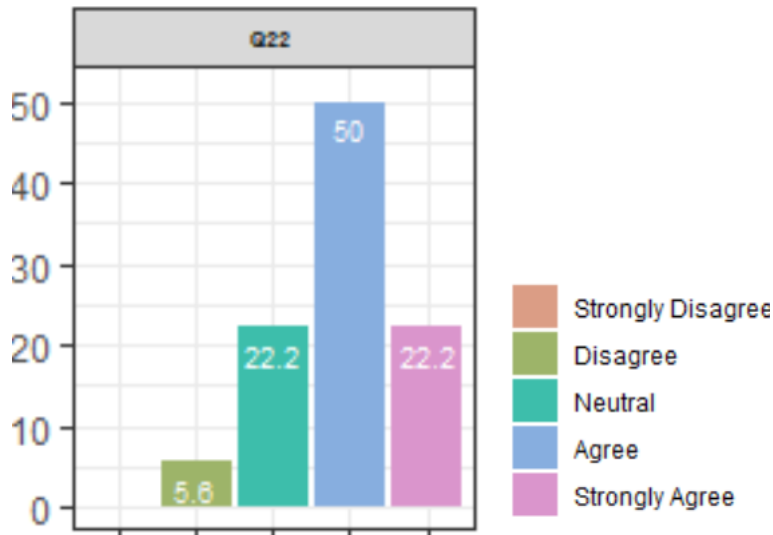


Figure 6.25.0: Respondents' answers regarding cascading downwards.

The finding showed that all respondents with low RM experience have either strongly agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.25.1). Majority of respondents (68%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and some 26% were neutral about the statement. Majority of respondents (75%) with high RM experience have either strongly agreed with statement and about 17 % of them were neutral about the statement. About 5% of respondents with moderate RM experience and 8 % of respondents with high RM experience disagreed with the statement.

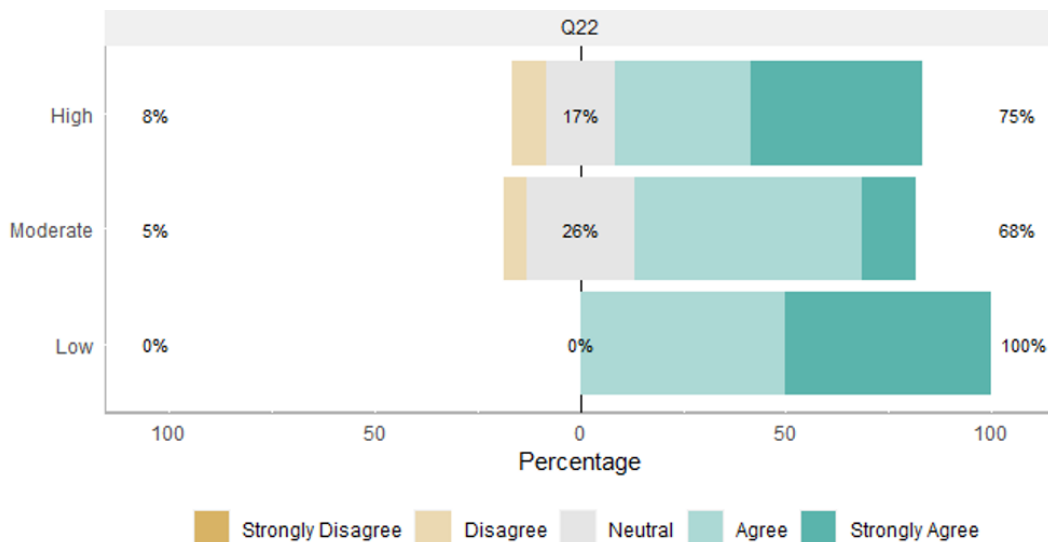


Figure 6.25.1: Respondents' answers regarding cascading downwards using different enterprise risk management experiences

The finding also showed that 67% of respondents with more than 10 years’ work experience agreed with statement and no one among them respondents strongly agreed or disagreed, but about 33% of them were neutral about the statement (Figure 6.25.2). Majority of respondents (70%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 26%% of them are neutral about the statement. While about 78% of respondents with less than five years’ experience have either strongly agreed or agreed with statement and 11% of them are neutral about the statement. No one strongly disagreed or disagreed with the statement. 9% of respondent respondents with less than five years’ work experience and 4% respondents (70%) with between 5- 10 years’ work experience disagreed with statement.

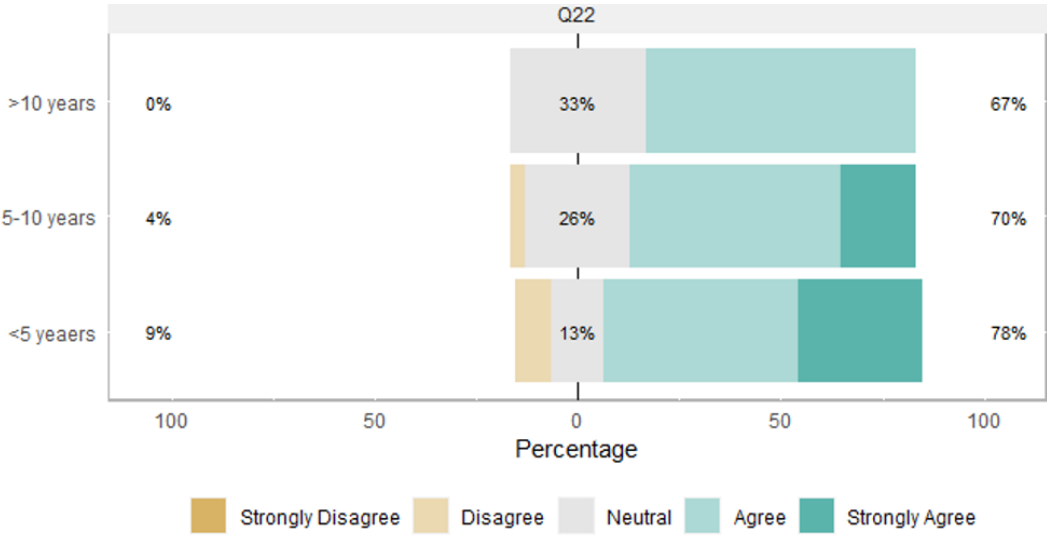


Figure 6.25.2: Respondents’ answers regarding cascading downwards using duration of employment

The finding showed that all respondents on top positions either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed or were neutral about the statement (Figure 6.25.3). About 23% of respondents on middle positions were neutral about statement and (70%) majority of these respondents either strongly agreed or agreed with statement. Some 6% of respondents on middle positions disagreed with the statement.

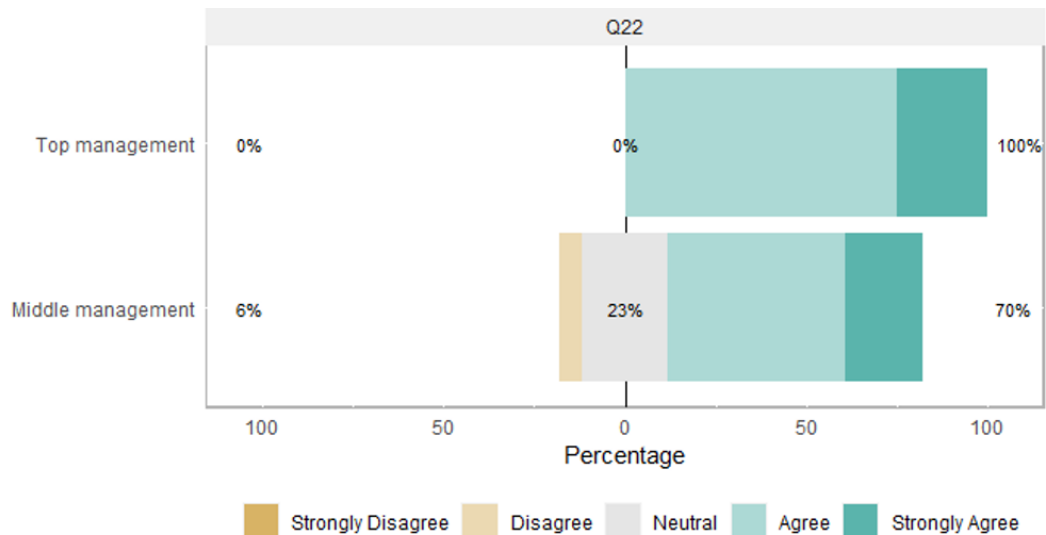


Figure 6.25.3: Respondents' answers regarding cascading downwards using level of management

A total of 23% of the respondents in middle management positions and 33% of the respondents with more than 10 years' work experience were neutral. This result shows that the hospital is committed to cascading risk management to lower levels, but that some experienced respondents were not convinced, yet that might be the reason they prefer to remain neutral. A total of 23% of the respondents in middle management positions and 33% of the respondents with more than 10 years' work experience were neutral.

6.10.4 Crisis-preparedness plan

The research statement: My hospital is well prepared to manage future risks as a result of lessons learnt on managing COVID-19 crisis

A total of 40,7% of the respondents strongly agrees with the statement that my hospital is well prepared to manage future risks as a result of lessons learnt on managing COVID-19 crisis, with further 48,1% also agreeing with the statement. A few respondents (1,9%) strongly disagreed with the statement, as well as 1,9% other respondents, who also did not disagree with it, while 7,4% also responded neutrally (Figure 6.26.0).

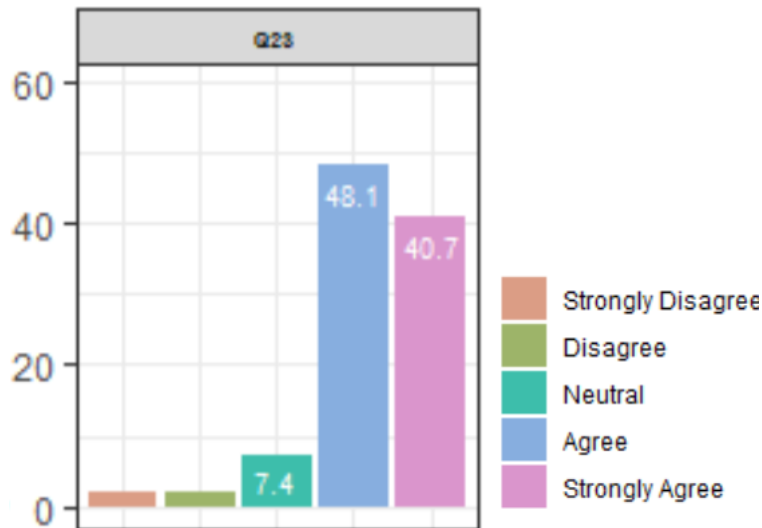


Figure 6.26.0: Respondents' answers regarding crisis-preparedness.

The finding showed that all respondents with low RM experience have either strongly agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.26.1). Majority of respondents (87%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and some 8% were neutral about the statement. Majority of respondents (92%) with high RM experience have either strongly agreed with statement and about 8 % of them were neutral about the statement. About 5% of respondents with moderate RM experience disagreed with the statement

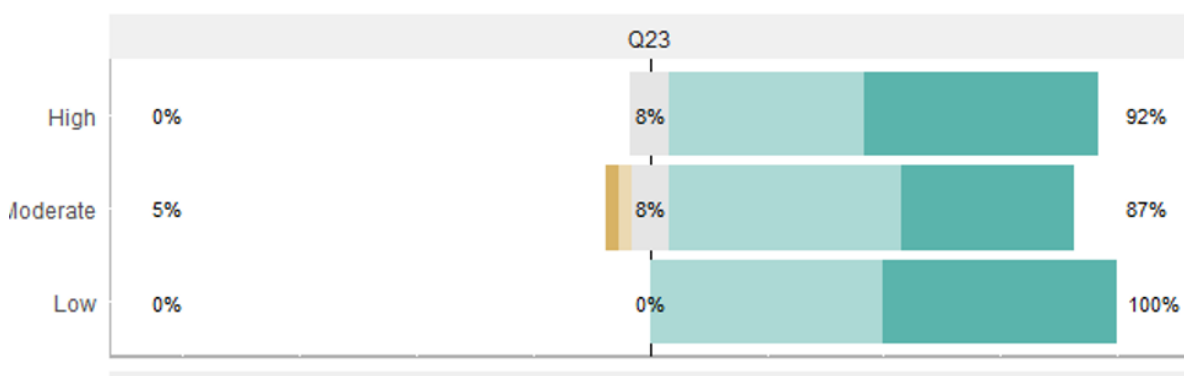


Figure 6.26.1: Respondents' answers regarding crisis-preparedness using different enterprise risk management experiences

The finding also showed that respondents with more than 10 years' work experience agreed with statement and no one among them respondents strongly agreed or disagreed or I s neutral with the statement (Figure 6.26.2) Furthermore, respondents with more less than 5 years' work experience either strongly agreed or agreed

with statement and no one among them respondents strongly agreed or disagreed or Is neutral with the statement. Majority of respondents (78%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 15 % of them are neutral about the statement. While about 7% of respondents with between 5- 10 years’ work experience and less than five years’ experience have either strongly disagreed or disagreed with statement.

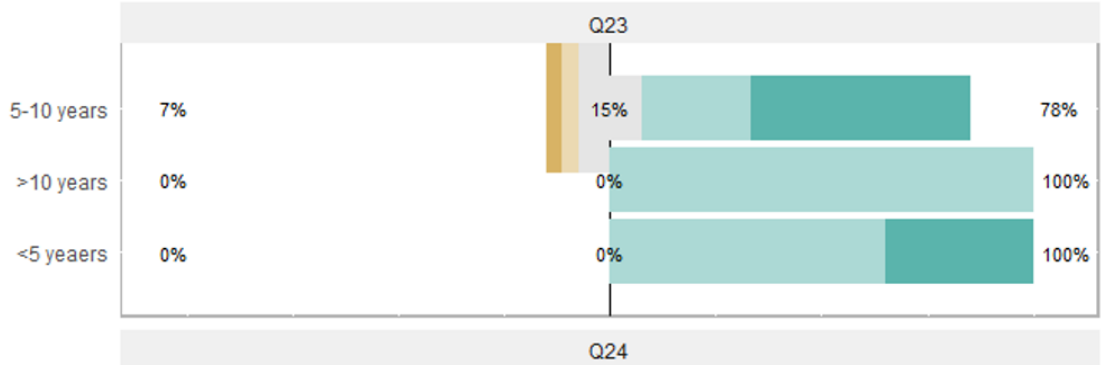


Figure 6.26.2: Respondents’ answers regrading crisis-preparedness using duration of employment

The finding showed that all respondents on top positions either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed or were neutral about the statement (Figure 6.26.3). About 9% of respondents on middle positions were neutral about statement and (87%) majority of these respondents either strongly agreed or agreed with statement. Some 4% of respondents on middle positions either strongly disagreed or disagreed with the statement.

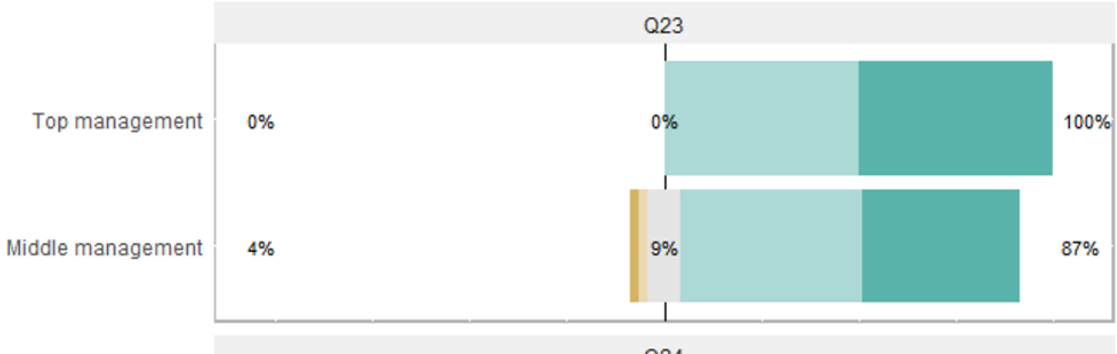


Figure 6.26.3: Respondents’ answers regarding crisis-preparedness using level of management

The results show that respondents believed that the XYZ PHC facility is well prepared to handle crisis in the future after the COVID-19 pandemic.

6.10.5. Summary of identified themes (best practices)

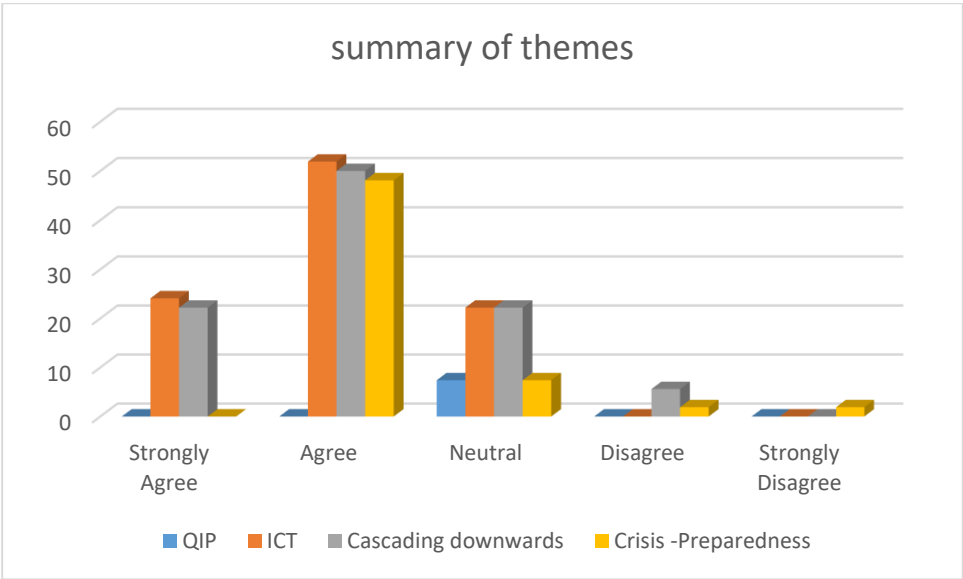


Figure 6.27: Summary of identified themes

Figure 6.27: The finding shows that the majority of the respondents agreed that the XYZ PHC facility is ready to handle future crisis and is using QIP to strengthen RM processes. They also agreed that ICT is an integral part of ERM process in the facility and the cascading RM downward happening, some experienced respondents were cautions to agree that both strategies are being implemented.

6.11 Enterprise risk management and COVID-19 infection

This section assesses the impact of COVID-19 pandemic on the raising awareness of mental health, RM and RM process. Risk champions reported that COVID-19 pandemic raised the profile of mental health among health care workers and elevated the role of ERM in ensuring that facility outcomes are achieved.

6.11.1 Mental health awareness

The research statement: The way in which the COVID-19 pandemic was managed increased awareness of mental health management during crisis

A total of 38,9% of the respondents strongly agrees with statement that way in which the COVID-19 pandemic was managed increased awareness of mental health management during crisis, 33,3% of the respondents also agreed with the statement. A total of 5,6% of the respondents disagreed with statement, while 16,7% of the respondents were neutral. Some of the respondents (1,9%) strongly disagreed with the statement. The results show that the majority of the respondents (66,6%) answered on positive but its worrying that one third of the respondent were neutral on such an important issue that was raised during COVID-19 pandemics (Figure 6.28.0).

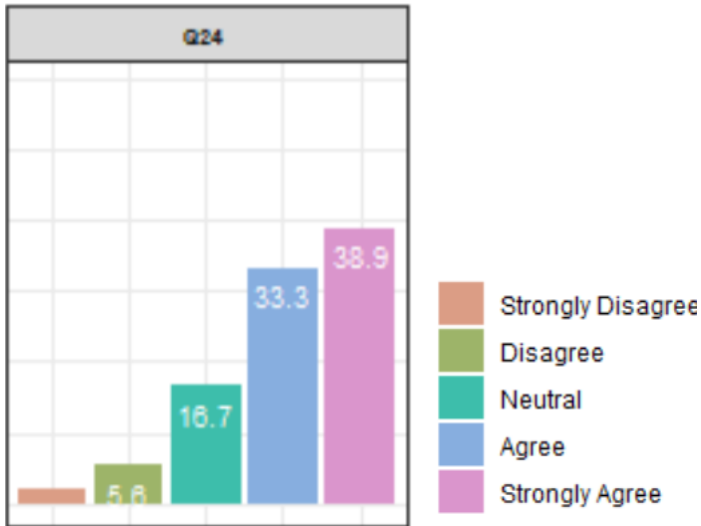


Figure 6.28.1: Respondents' answers regarding mental health awareness.

The finding showed that majority of respondents (75%) with low RM experience have either strongly agreed with statement and no one among those respondents strongly disagreed or disagreed with the statement (Figure 6.28.1). Majority of respondents (78%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and some 16% were neutral about the statement. Majority of respondents (64%) with high RM experience have either strongly agreed with statement and about 18% of them were neutral about the statement. About 5% of respondents with moderate RM experience disagreed with the statement. 25% of respondents with low RM experience were neutral about the statement, while 18% of respondents with high RM experience and 5% with moderate RM experience have either strongly disagreed or disagreed with statement.

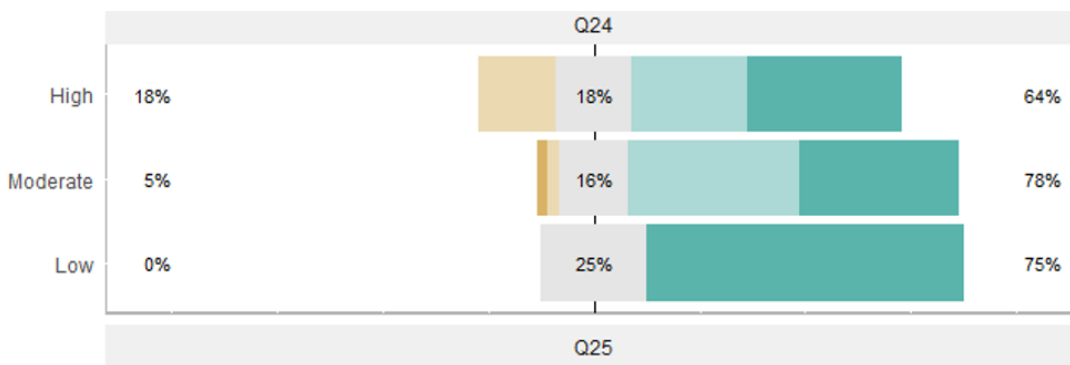


Figure 6.28.1: Respondents' answers regarding mental health awareness using different enterprise risk management experiences

The finding also showed that respondents with more than 10 years’ work experience either strongly agreed or agreed with statement and no one among them respondents strongly agreed or disagreed or answered in the neutral with the statement (Figure 6.28.2). furthermore, about 91% respondents with less than 5 years’ work experience either strongly agreed or agreed with statement and 5% of them disagreed with the statement. Majority of respondents (62%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 27 % of them are neutral about the statement. While about 12 % of respondents with between 5- 10 years’ work experience disagreed with statement.

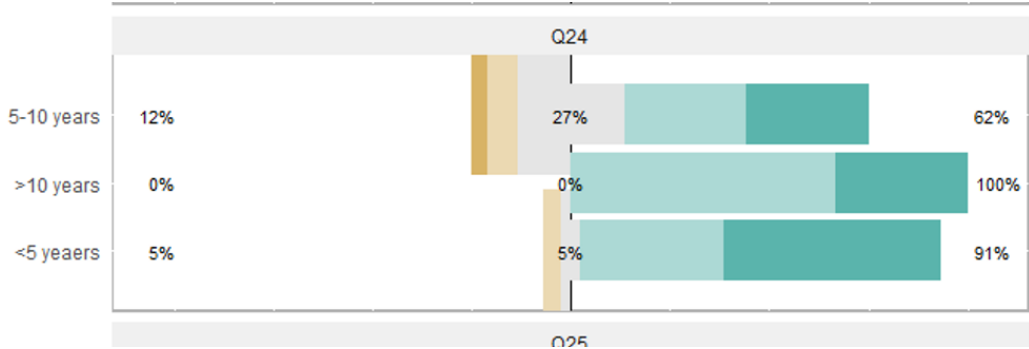


Figure 6.28.2: Respondents’ answers regarding mental health awareness using duration of employment

The finding showed that all respondents on top positions either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed or were neutral about the statement (Figure 6.29.3). About 20 % of respondents on middle positions were neutral about statement and (71%) majority of these respondents either strongly agreed or agreed with statement. Some 9% of respondents on middle positions either strongly disagreed or disagreed with the statement.

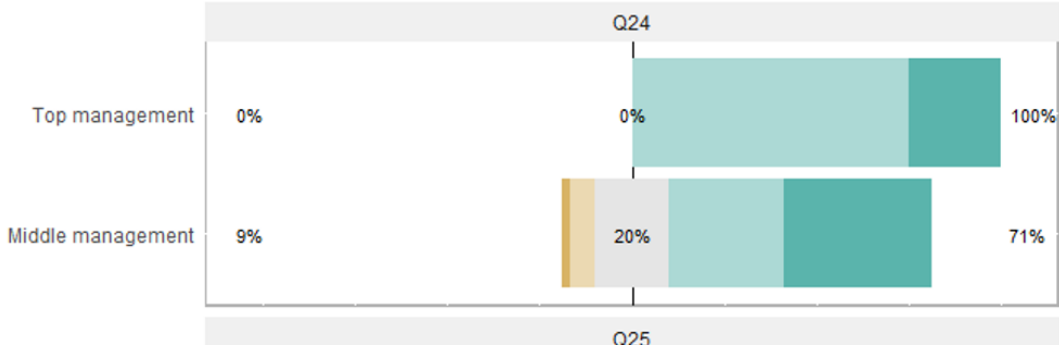


Figure 6.28.3: Respondents’ answers regarding mental health awareness using level of management

The results show that the majority of the respondents (66,6%) answered on positive but it’s worrying that some experienced respondents (17%) in RM disagreed with the statement on such an important issue that was raised during COVID-19 pandemics.

6.11.2 Processes of enterprise risk management

The research statement: The way in which the COVID -19 pandemic was managed improved risk management processes in the hospital

A total of 35,2% of the respondents strongly agrees the way in which the COVID-19 pandemic was managed improved risk management processes in the hospital, while 59,3% also agreed with the statement. Some of the respondents disagreed with statement. A few respondents (1,9%) were neutral and no respondent strongly disagreed with the statement, thereby proving that COVID-19 pandemic improved risk management processes in the facility (Figure 6.29.0).

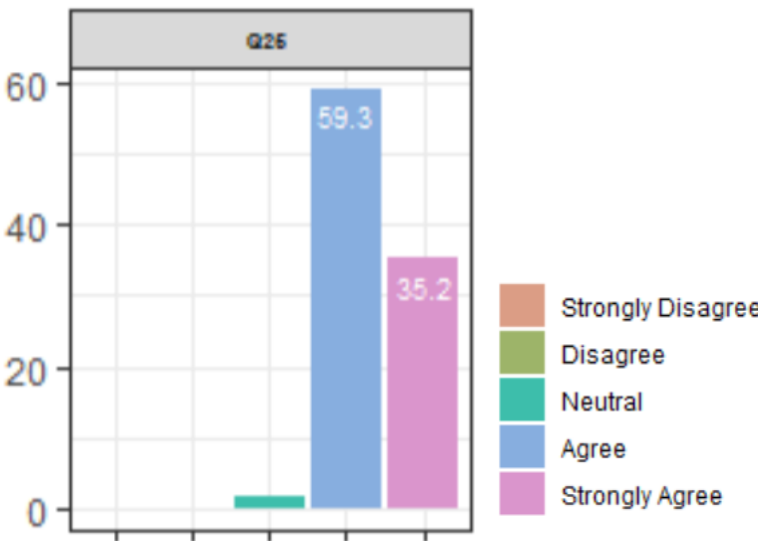


Figure 6.29.0: Respondents’ answers regarding the processes of enterprise risk management.

The finding showed that respondents with low and high RM experience have either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed with the statement or were neutral with the statements. (Figure 6.29.1). Vast Majority of respondents (97%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and only 3% were neutral about the statement. No one strongly disagreed or disagreed with the statement.

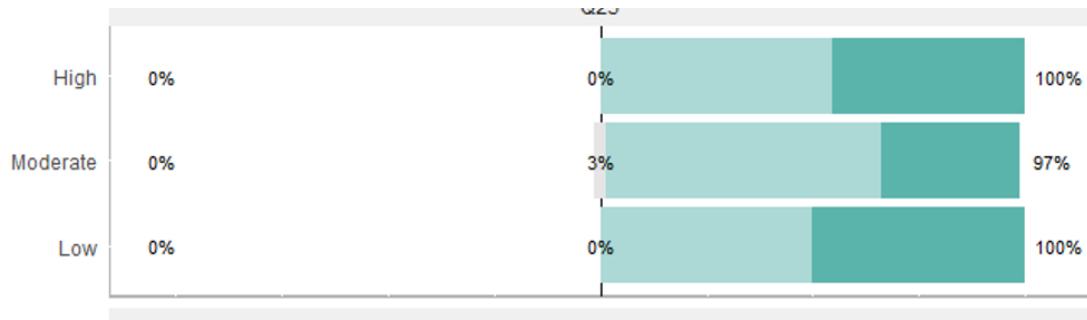


Figure 6.29.1: Respondents’ answers regarding the processes of enterprise risk management using different enterprise risk management experiences

The finding also showed that all respondents with more than 10 years’ work experience and respondents with between 5- 10 years’ work experience either strongly agreed or agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.29.2). Majority of respondents (96%) with less than 5-years’ work experience have either strongly agreed or agreed with statement and 4 % of them are neutral about the statement.

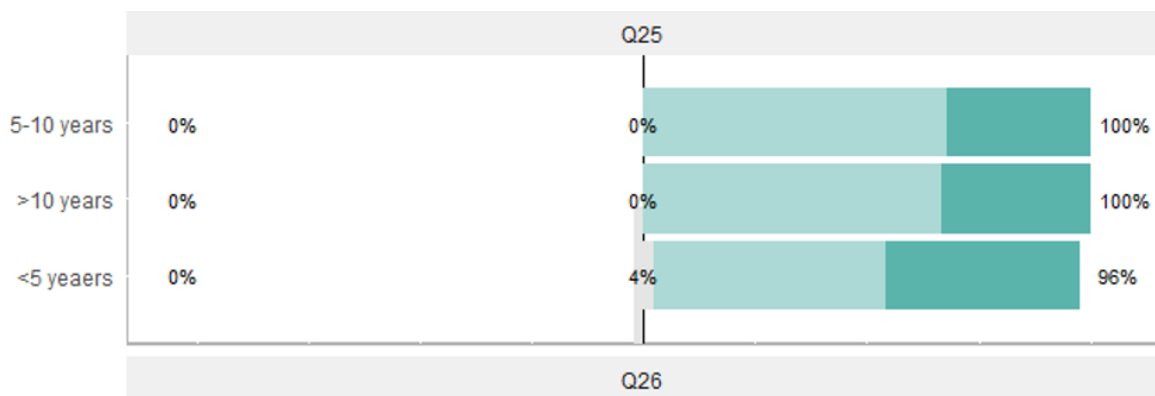


Figure 6.29.2: Respondents’ answers regarding the processes of enterprise risk management using duration of employment

The finding showed that all respondents on top positions either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed or were neutral about the statement (Figure 6.29.3). About 2 % of respondents on middle positions were neutral about statement and (98%) majority of these respondents either strongly agreed or agreed with statement.

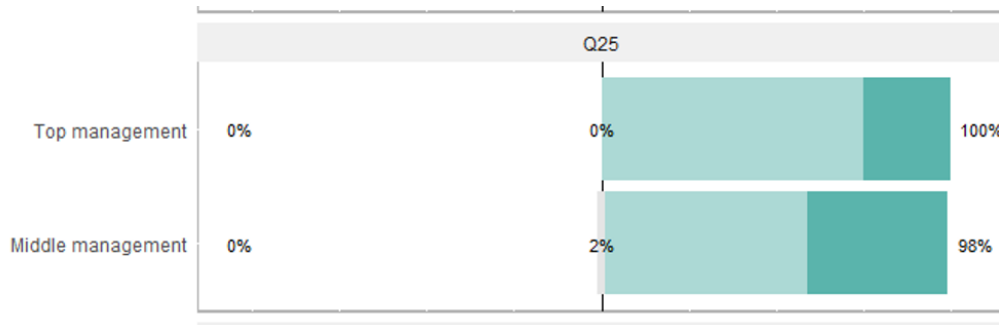


Figure 6.29.3: Respondents’ answers regarding the processes of enterprise risk management using level of management

The finding shows that the majority of the respondents either strongly agreed or agreed with statement. The results show all different respondents with range of knowledge and experience believe that the COVID-19 pandemic improved risk management processes in the facility.

6.11.3 Awareness of enterprise risk management

The research statement: The way the COVID-19 – was managed increased the awareness of risk management processes in the hospital

A total of 44,4% of the respondents strongly agreed that the way the COVID-19 was managed increased the awareness of risk management processes in the hospital, with further 50% also agreeing with the statement. Approximately 3,7% of the respondents were neutral, while no respondents strongly disagreed or disagreed with statement showing that COVID-19 resulted in Risk management awareness (Figure 6.30.0).

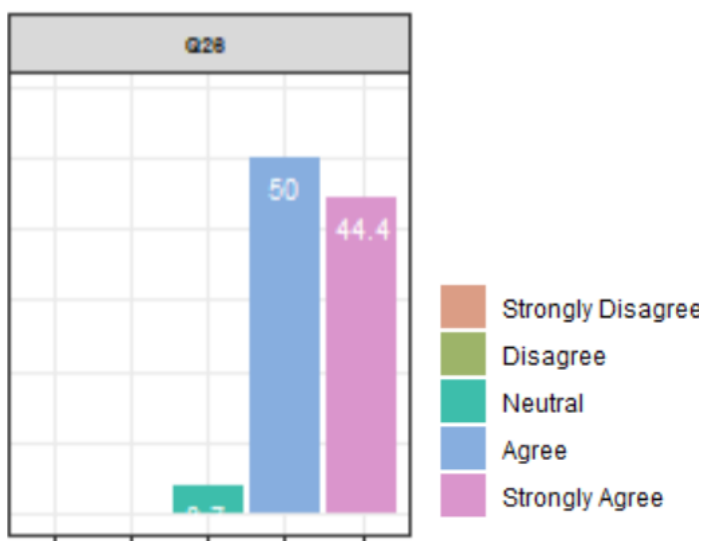


Figure 6.30.0: Respondents’ answers regarding the awareness of enterprise risk management.

The finding showed that respondents with low and high RM experience have either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed with the statement or were neutral with the statements. (Figure 6.30.1). Vast Majority of respondents (95%) respondents with moderate RM experience either strongly agreed or agreed with the statement, and only 5% were neutral about the statement. No one strongly disagreed or disagreed with the statement.

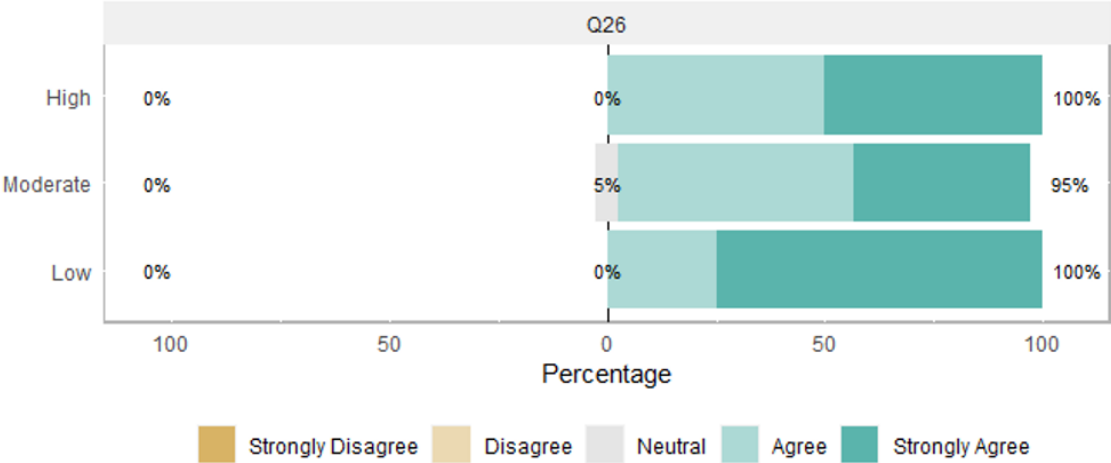


Figure 6.30.1: Respondents’ answers regarding the awareness of enterprise risk management using different enterprise risk management experiences

The finding also showed that all respondents with more than 10 years’ work experience and respondents with less than 5 years’ work experience either strongly agreed or agreed with statement and no one among them respondents strongly agreed or disagreed or is neutral with the statement (Figure 6.30.2). Majority of respondents (96%) with between 5- 10 years’ work experience have either strongly agreed or agreed with statement and 4 % of them are neutral about the statement.



Figure 6.30.2: Respondents' answers regarding the awareness of enterprise risk management using duration of employment

The finding showed that all respondents on top positions either strongly agreed or agreed with statement and no one among them strongly disagreed or disagreed or were neutral about the statement (Figure 6.30.3). About 4 % of respondents on middle positions were neutral about statement and (96%) majority of these respondents either strongly agreed or agreed with statement.

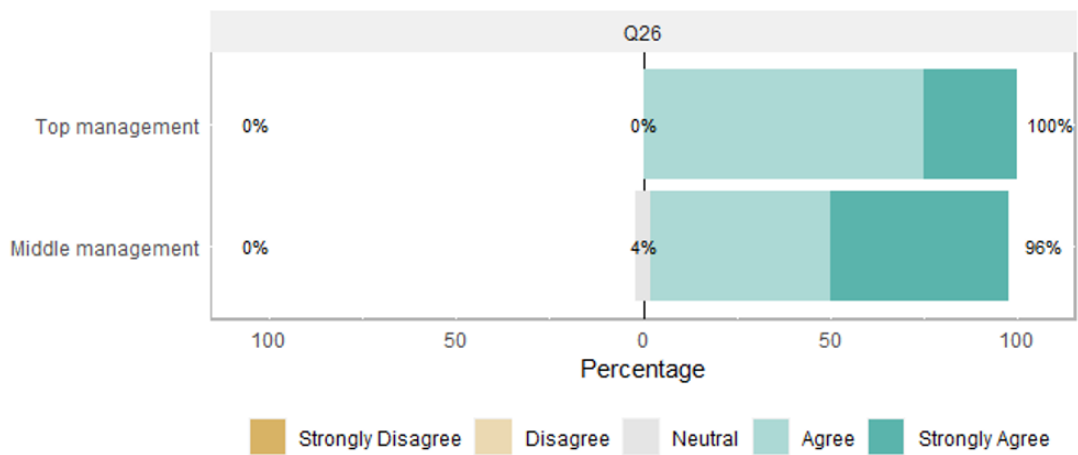


Figure 6.30.3: Respondents' answers regarding the awareness of enterprise risk management using level of management

The finding shows that the majority of the respondents either strongly agreed or agreed with the statement. The results show all different respondents with range of knowledge and experience believe that the COVID-19 pandemic raised risk management awareness in the facility.

6.11.4. Summary of COVID-19 risk management strategy impact on XYZ PHC facility

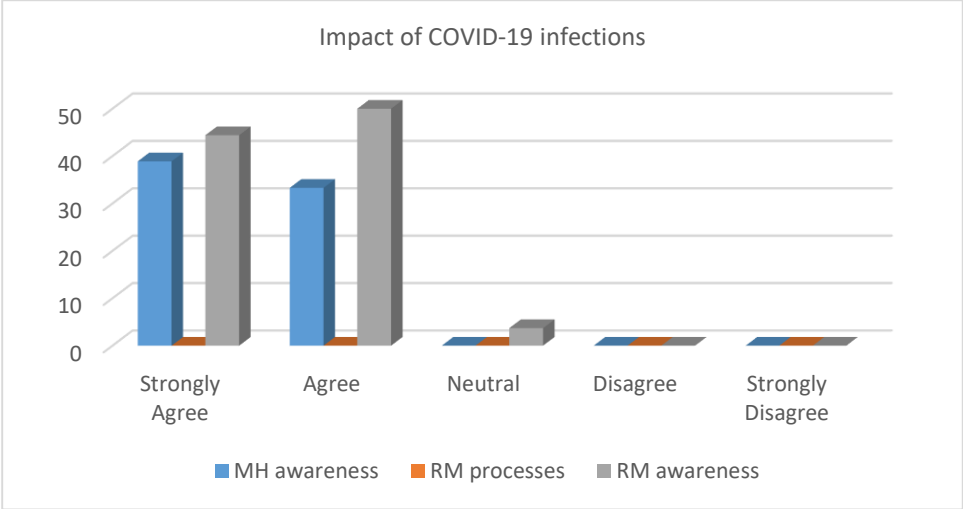


Figure 6.31: Impact of COVID-19 risk management strategy

The evidence that the COVID-19 risk management strategy had a beneficial impact on the XYZ PHC facility is supported by the overall impression that the COVID-19 infection raised awareness of mental health and improved RM processes and awareness.

6.1. Summary of research findings from quantitative research.

Table 6.1: Summary of key findings from quantitative research.

Main headings & sub headings	Questionnaire questions	Findings
Understanding of Enterprise risk management		
Understanding Enterprise risk management	I have a good understanding of risk management processes and activities in this hospital.	68.2% of the respondents indicated that they had a good understanding of the enterprise risk management process, while 22 % of respondents were unsure whether they understood the risk manage processes in the facility. 9.3% of the respondents indicated that they don't have a good understanding of the risk management process.

		All respondents in top management positions and with more than 10 years' work experience had a good understanding of the risk management processes and 22% of the respondents with less than 5 years' work experience and 75% of respondents with low RM indicated that they had a poor understanding of the risk management processes.
Enterprise risk management's processes		
Objective setting	My hospital identifies potential events affecting the entity's ability to successfully achieve its objectives.	<p>About 74.1 % of respondents believed that the hospital establishes and communicates explicitly risk tolerance levels or limits for all major risks and 22.2% of the respondents were unsure and no one disagreed with the statement.</p> <p>The results showed that the majority of the respondents believe that the pillar is present and functional in the facility.</p>
Internal Environment	The tone from senior management communicates the importance of risk management.	<p>About 77.8% of respondents supported that the tone from senior management communicates the importance of risk management, while 3.7 % of the respondents disagreed.</p> <p>About 14.8% of the respondents were unsure whether the tone of senior management communicates the importance of risk management.</p>
Event Identification	My hospital identifies potential events affecting the entity's ability to successfully achieve its objectives.	<p>About 81.5 % of the respondents agreed that the hospital identifies potential events affecting the entity's ability to successfully achieve its objectives and 11.1% of the respondents were unsure and 3.7 % of the respondents disagreed with the statement.</p> <p>The results showed that the majority of the respondents believe that the pillar is present and functional in the facility.</p>
Risk assessment	My hospital performs a formalised risk assessment process on a regular basis.	<p>About 83.4% % of the respondents believed that the hospital performs a formalised risk assessment process on a regular basis and 3.7 % of the respondents disagreed.</p> <p>Additionally, 11.1% of the respondents were neutral (undecided). The majority of the respondents who disagreed with the statement</p>

		<p>were respondents who were in middle management positions and had had moderate risk management experience.</p> <p>The results showed that the majority of the respondents believed that the pillar is present and functional in the facility.</p>
Risk response	For each risk event, my hospital determines the appropriate risk response option of avoiding, reducing, sharing or accepting the risks.	<p>The vast majority of the respondents (90.8%) agreed that for each risk event, my hospital determines the appropriate risk response option of avoiding, reducing, sharing or accepting the risks and no one disagreed.</p> <p>All respondents with high risk management experience and those with more than 10 years' work experience and top managers agreed with the statement.</p> <p>The results showed that the majority of the respondents believed that the pillar is present and functional in the facility.</p>
Control activities	The control activities in my hospital include actions to be implemented to address the risks faced by the organisation.	<p>The vast majority of respondents (90.8%) supported the statement that the control activities in the hospital include actions to be implemented to address the risks faced by the organisation, and no one disagreed. About 9.3% of the respondents were neutral (undecided).</p> <p>The majority of undecided respondents (25%) were respondents who had high risk management experience.</p> <p>The results showed that the majority of the respondents believed that the pillar is present and functional in the facility.</p>
Information & Communication	In my hospital there is a process to enable employees to report risk events that may have occurred in their area of responsibility.	<p>The majority of the respondents (85.2%) agreed that the hospital has a process that enabled employees to report risk events that have occurred in their areas of responsibility, and no one disagreed. About 14.8% of the respondents were undecided whether the hospital had a process.</p> <p>The majority of the respondents (>75%) who strongly agreed with the statement were respondents holding top management posts, while all respondents with more than 10 year's work experience agreed with the statement.</p>

		The results showed that the majority of the respondents believed that the pillar is present and functional in the facility.
Monitoring & reviewing	Ongoing monitoring of all the risk activities is performed on a regular basis.	<p>About 68.5 % of the respondents agreed that ongoing monitoring of all the risk activities is performed on a regular basis and 5.6% of the respondents disagreed. Additionally, 20.5% of the respondents were unsure of what to answer.</p> <p>The findings showed that all the respondents in top management positions and those with high RM experience strongly agreed with the statement while respondents (8%) with moderate RM experience and 5-10 years' experience disagreed with the statement.</p> <p>The results showed that the majority of the respondents believed that the pillar is present and functional in the facility.</p>

Critical success factors of effective enterprise risk management

Stakeholder management	The hospital collaborated effectively with its stakeholders to manage the risk of COVID -19.	<p>The majority of respondents (79.6%) agreed that the hospital collaborated effectively with its stakeholders to manage the risk of COVID -19, and no one disagreed with the statement. About 16.7% of the respondents were neutral or undecided about the statement.</p> <p>The findings showed that all the respondents in top management positions and those with low RM experience strongly agreed with the statement while 33% of respondents with more than 10 years' work experience and were the majority of the respondents were neutral.</p> <p>The results showed that the majority of the respondents believed that stakeholder engagement is vital for effective enterprise risk management implementation.</p>
------------------------	--	---

Communication	The communication strategy was clear and effective in support of COVID-19 risk management in the hospital.	<p>The vast majority of the respondents (90.7%) believed that the communication strategy was clear and effective in support of COVID-19 risk management in the hospital, while 1.9% of the respondents disagreed and 5,6 % were neutral.</p> <p>All the respondents who were in top management positions and those with more than 10 years' work experience as well as those with low risk experience agreed with the statement.</p> <p>The results showed that the majority of the respondents supported that communication is critical for effective risk management implementation.</p>
Availability of resources	The hospital made resources available for risk management during COVID -19.	<p>The vast majority of the respondents (90.7%) agreed the hospital made resources available for risk management during COVID -19. Some of the respondents (5.6%) were neutral and no respondents disagreed with the statement.</p> <p>All the respondents who were in top management positions, those with more than 10 years' work experience and those with less than 5 years' work experience as well as those with low risk experience agreed with the statement.</p> <p>The results showed that the majority of the respondents agreed that availability of resources enhanced effective risk management implementation.</p>
Regular training	Regular trainings helped the organisation to keep up to date with changes and information during the COVID-19 pandemic.	<p>The majority of the respondents (84.2%) agreed regular trainings helped the organisation to keep up to date with changes and information during the COVID-19 pandemic, and about 3.7% of the respondents disagreed.</p> <p>About 11% of the respondents with moderate risk management experience, and 12 % with between 5 and 10 years' work experience disagreed.</p> <p>The results showed that the majority of the respondents who agreed that regular trainings helped, were critical about effective risk management implementation.</p>

Impact of the COVID-19 risk management strategy on performance

<p>Impact on performances</p>	<p>The COVID- 19 risk management strategy had a positive impact on the organisation’s performances.</p>	<p>The majority of respondents (87.1%) believed that the COVID-19 risk management strategy had a positive impact on the organisation’s performances and no one disagreed. About 7.45% of the respondents were neutral (undecided).</p> <p>The results showed that different respondents with a range of knowledge and experience believed that the COVID-19 risk management strategy had a positive impact on the organisation’s performances. Therefore, they confirmed that the COVID- 19 risk management strategy improved the XYZ PHC facility’s performances.</p>
<p>Impact on risk management processes</p>	<p>The way in which the COVID -19 pandemic was managed improved risk management processes in the hospital.</p>	<p>The vast majority of respondents (94.5%) agreed that the way in which the COVID -19 pandemic was managed, improved risk management processes in the hospital, while a few respondents (1.9%) were undecided. No one disagreed with the statement.</p> <p>The results showed different respondents with range of knowledge and experience believed that the COVID-19 pandemic improved risk management processes in the facility.</p>
<p>Impact on risk management awareness</p>	<p>The way the COVID-19 pandemic was managed increased the awareness of risk management processes in the hospital</p>	<p>The vast majority of respondents (94.4%) agreed that the way COVID-19 was managed, increased the awareness of risk management processes in the hospital and no one disagreed. A few respondents (3.7%) were undecided (neutral).</p> <p>The results showed different respondents with range of knowledge and experience believed that the way COVID-19 was handled, raised awareness regarding risk management processes in the facility.</p>

Evaluation of enterprise risk management effectiveness

Hospital targets (efficacy indicators)	The effectiveness of the COVID-19 risk management was evaluated using hospital targets (efficacy indicators)	<p>79.6% of the respondents agreed that hospital targets (efficacy indicators) were used to evaluate the effectiveness of COVID-19 risk management, while approximately 1.9% of the respondents disagreed with the statement. About 16.7% of the respondents were neutral and 67 % (majority) of respondents who were neutral were from the respondents with more than 10 years' experience.</p> <p>The results showed that hospital targets (efficacy indicators) were used to evaluate the effectiveness of the COVID-19 risk management strategy.</p>
Risk management benchmarks	The effectiveness of the COVID-19 risk management was evaluated using risk management benchmarks.	<p>83.4% of the respondents agreed that risk management benchmarks were used to evaluate the effectiveness of COVID-19 risk management, while approximately 1.9% of the respondents disagreed with the statement. Approximately 13% of the respondents were neutral (undecided), and 67% of the respondents with more than 10 years' experience were neutral.</p> <p>The results showed that risk management benchmarks were used to evaluate the effectiveness of the COVID-19 risk management strategy.</p>
Themes (best practices)		
Quality improvement plans	The hospital utilises quality improvement plans to strengthen risk management processes.	<p>The vast majority of respondents (92.0%) agreed that the hospital utilised quality improvement plans to strengthen risk management processes. and no one disagreed Some respondents (7.3%) were undecided (neutral). 25% of the respondents with low risk management experience were undecided, followed by 11% of the respondents with 5 to 10 years' work experience.</p> <p>The results showed that the respondents believed that the hospital utilised quality improvement plans to strengthen risk management processes.</p>
Information and communication technologies	The hospital integrated information and communication technologies in risk management practices.	<p>The majority of respondents (76.0%) agreed that the hospital integrated information and communication technologies in risk management practices, while about 1.9 % of the respondents disagreed. About 22.2% of the respondents were neutral (undecided). 67% of the respondents with high risk management</p>

		<p>experience were neutral as well as 25 % of respondents in top management posts.</p> <p>The results showed that the respondents believed that the hospital integrated information and communication technologies in risk management practices.</p>
Cascading risk management downwards	The hospital is committed to cascading risk management to lower levels.	<p>The majority of respondents (72.28%) agreed that the hospital was committed to cascading risk management to lower levels, while 5.6 % of the respondents disagreed. About 22.24% of the respondents were neutral (undecided). 13% of the respondents who disagreed were respondents with less than 5 years' work experience and followed by 8% of respondents with high risk management experience.</p> <p>The results showed that the respondents believed that the hospital was committed to cascading risk management processes to lower levels.</p>
Crisis preparedness /disaster plan	My hospital is well-prepared to manage future risks as a result of lessons learnt on managing the COVID-19 crisis	<p>The majority of respondents (88.8%) believed that the hospital was well-prepared to manage future risks as a result of lessons learnt on managing the COVID-19 crisis, and some respondents (3.8%) disagreed. About 7.4% of the respondents were neutral (undecided). 7% of the respondents who disagreed were respondents with 5 to 10 years' work experience and followed by 5% of the respondents with moderate risk management experience.</p> <p>The results showed that respondents believed that the facility was well-prepared for future crises.</p>
Mental health awareness	The way in which the COVID-19 pandemic was managed increased awareness of mental health management during the crisis.	The majority of the respondents (72.2%) agreed that the way in which the COVID-19 pandemic was managed, increased mental health awareness, and about 16.7% of respondents were neutral and 1.9% of respondents disagreed. 18% of the respondents who disagreed were respondents with high risk management experience and were followed by 12% of the respondents with 5 to 10 years' work experience.

		The results showed that mental health awareness was raised by the facility during the pandemic.
--	--	---

(Source: self-complied by author)

Table 6.1 Summarised of key findings from quantitative research by linking them to the research questions. These findings will be analyse in the following chapter.

6.12 Conclusion

This chapter was focused on presenting and interpreting research results from quantitative data, linking them with literature, theory and qualitative data. The discussions highlighted effectiveness of the risk management process used to develop the COVID-19 risk management strategy at the XYZ PHC facility quantitatively. The next chapter will focus on analyse in the findings.

Chapter 7: Quantitative analysis

7.1 Introduction

Chapter 6 focused on presenting the finding of quantitative data using mainly graphs. The main focus of this chapter is to analyse and discuss the findings in line with the research objectives. As previously done in chapter 5, the heading of this chapter will aligned to the research questions are as follows

1. What is enterprise risk management?
2. What criteria are used to assess the effectiveness of enterprise risk management?
3. What are the critical success factors for effective enterprise risk management procedures?
4. What was the impact of the COVID-19 risk management strategy on the XYZ PHC's performance?
5. How can the XYZ PHC's Enterprise Risk Management Strategy be improved to better cope with future risks such as COVID-19?

7.2. What is enterprise risk management?

According to Bromiley et al, (2015) ERM allows organisations to comprehensively and coherently approach and manage all risks, avoiding siloed approaches, and helps management achieve performance and profitability targets while safeguarding resources. The purpose of this question was to gauge the respondent's comprehension of the enterprise risk Management. Over all a total of about 68,1% of the respondents seem to understood the ERM,

while about 9.3% of the respondents indicated that they not understand ERM and about 22,2% of respondents were neutral (unsure) about it.

A total of 44,4% of respondents said they understood ERM well, and another 24,1% indicated that they understood ERM very well. Surprisingly, 7.4% of respondents didn't understand ERM at all and about 1.9% of the respondents had a slight idea what ERM entails. The results also showed that respondents in top management positions and more than ten years work experience believe to understand ERM compare with respondents with low RM experience and less than five years' experience. It also showed that about 75% of respondents with low RM experience have stated they didn't understand ERM at all and 25% of them where not sure if they understand ERM.

7.3. What criteria are used to assess the effectiveness of enterprise risk management?

There no standard way of assessing ERM effectiveness, thus Department of health uses risk management benchmarks that based on national or department target to assess it RM implementation effectiveness. According to findings of qualitative results the research participants reported that they monitored ERM strategy effectiveness using efficiency indicators on daily, weekly and monthly basis and evaluate its effectiveness on quarterly basis using a risk management bench mark. Furthermore, the results of quantitative shows that that efficient indicators and a risk management benchmark were used to assess and monitor the effectiveness of the COVID-19 risk management plan in the XYZ PHC facility. The results showed that about 79,6% and 83,4 % of respondents confirmed that the facility used these two criteria to assess the effective of ERM during the pandemic. The research shows that these two criteria can used to find the standard way of assessing ERM effectiveness in the public sector.

7.4. What are the critical success factors for effective enterprise risk management procedures?

These critical success factors have been identified by risk champions to have played a vital role in COVID-19 management implementation.

7.4.1 Stakeholder involvement

Stakeholder management is the process of maintaining good relationships with the people who have most impact on your work (Bourne 2009). Majority of participants showed that stakeholder engagement was vital for effective ERM implementation. The results of quantitative showed that majority of respondents (79,6%) agrees that the hospital collaborated effectively with its stakeholders to manage the risk of COVID -19. About 16,7% of the respondents were undecided but no respondent indicated that hospital didn't collaborate effectively with its stakeholders. The results are in line with the qualitative findings that showed that the facility used WHO and UFS technical teams well to enhance their ERM program.

7.4.2 Communication

The aim of risk communication is to advance risk awareness and understanding, as well as promoting health-protective behaviour among individuals, therefore, communication is a crucial factor to consider for effective risk management. Grabowski and Roberts (1999) assert that communication plays a significant role in risk mitigation.

Vast majority of respondents (90,7%) agreed that communication strategy was clear and effective in support of COVID-19 risk management and no one disagreed. about 7% of respondents in middle management position and 5% of respondents with moderate RM experience (5%) were undecided if the strategy was clear and simple. The results support qualitative finding that ERM meeting were held on weekly basis with facility and provincial COVID-19 command teams to monitor and review action plans regarding COVID-19 pandemic, thus communication platform were more frequent during this period. Additionally, research participants in the qualitative research confirmed an increased use of technology as means of communication during the COVID-19 pandemic. They reported that WhatsApp platforms were mostly used for informal communication as result the facility experienced an increased numbers of WhatsApp groups that were created as means of communication platform among staff.

7.4.3 Resources

One of the key finding in the qualitative research in chapter 4 was the provision of adequate resources to implement effective ERM practices. Resource risk management involves identifying potential risks to resources and taking appropriate measures to mitigate them. Resource risk management is the process of identifying, assessing, and mitigating risks to the availability, capacity, and capability of resources required for a program. It involves analysing potential risks that could impact the program's resources and developing strategies to minimise their impact or prevent them from occurring altogether. Vast majority of respondents (90,7%) agreed that the hospital made resources available for risk management during COVID -19 and no one disagreed. The resulted also showed that shows all top management respondents, respondent with more than 10 years' experience and respondents with high experience agreed that hospital made resources available during COVID-19 pandemic. Moreover, the participants in the qualitative research reported that the main role of TM during the period was to avail resources and ensure that plans are carried out. Therefore, availability of resources was prioritised for effective ERM implementation.

7.4.4 Training

Training plays a vital role in ensuring the successful implementation of ERM. According to Kleffner et al. (2003) providing training programmes for employees at all levels helps to reduce misunderstandings and anxieties associated with ERM adoption and implementation. Carey (2001) highlights the importance of training in enabling organisations to respond effectively to changing operational conditions. Vast majority of respondents (85,2%) agree that regular trainings helped the organisation to keep up to date with changes and information during the COVID-19 pandemic and about 12% of respondents with 5-10 years' experience and 9% on middle management (9%) disagreed. The respondents who disagreed may indicate the type of training offered was not tailor made to the situation sometimes and didn't offer information according to the latest research paper.

7.5. What was the impact of the COVID-19 risk management strategy on the XYZ PHC's performances?

Vast majority of respondents (87,2%) agreed that COVID-19 risk management strategy had a positive impact on the organisation's performances and no disagreed. Other vast majority of the respondent (80%) agreed with that COVID-19 risk management strategy also improved risk management awareness and processes in the facility.

Even though majority of respondents (2,2%) agreed that mental health awareness was raised during COVID-19 pandemic its worrying that 18% respondent in RM disagreed because qualitative research revealed that majority of the staff reported sick due to stress and anxiety.

Finally, overall the results showed that all the different respondents with a range of knowledge and experience believe that a COVID-19 risk management strategy had a positive impact on the organisation's performances.

7.6. How can the XYZ PHC's Enterprise Risk Management Strategy be improved to better cope with future risks such as COVID-19?

7.6.1 Quality improvement plan

QIP is tool that Department of Health uses to improve its shortcoming in a systemic way. It is a roadmap to improve the quality of the health system in an incremental fashion using the latest professional knowledge that is evidence based. Majority of respondents (92,0%) agreed that hospital is using quality improvement plans to strengthened risk management processes, with only7,4% of the respondents being undecided and no one disagreed. Majority of respondents (65%) of the respondents who were undecided comes from the respondents with low RM experience, thus this group must be targeted for training of QIP. Overall, the results showed that different respondents with a range of knowledge and experience believe that the XYZ PHC facility is using quality plans to improve risk management processes.

7.6. 2 Information and communication technology

According to Halliday, et al (1996:22) information technology has two parts, information systems and computer technologies. Information systems includes business functions and processes, while computer technologies that support the processing, storage, and distribution of an organisation's data and information. Roland (2008) suggests leveraging IT to drive effective RM by using it to create link between RM and corporate performance. It can have used as a platform for risk communication and reporting. Majority of respondents (76,0,%) agreed that hospital is integrating Information and Communication Technologies in risk management practices and no one disagreed. But that 67% of the respondents with more than 10 years' experience were undecided, which might suggest that experienced staff were not convinced that the hospital is integrating system.

7.6.3 Cascading downwards

Enterprise risk management is an approach of managing risks in an integrated was across the discipline including all managers in different levels and organisation's stakeholders. Cascading risk management to lower levels should also include ordinary staff, so that each employee within the department should take responsibility for ensuring sound RM practices and be held accountable for achieving results. Majority of respondents (72,2%) agreed that the hospital is committed to cascading risk management to lower levels. Approximately 5,6% of the respondents don't believe that risks are being cascade downwards and that some (22%) respondents were not convinced, yet that might be the reason they prefer to remain neutral (undecided)

7.6.4 Crisis-preparedness plan

A disaster plan is a written, approved, implemented, and periodically tested program specifically outlining all actions to be taken to reduce the risk of avoidable disaster and minimise the loss should a disaster occur (Brazier 2011). Majority of respondents (88,8%) agreed that the hospital is well prepared to manage future risks as a result of lessons learnt on managing COVID-19 crisis, while few respondents (3,9) believed that the hospital is not ready or prepared. Disagreed.

A total of 40,7% of the respondents strongly agrees with the statement that my hospital is well prepared to manage future risks as a result of lessons learnt on managing COVID-19 crisis, with further 48,1% also agreeing with the statement. A few respondents (1,9%) strongly disagreed with the statement, as well as 1,9% other respondents, who also did not disagree with it, while 7,4% also responded neutrally

The finding shows that the majority of the respondents agreed that the XYZ PHC facility is ready to handle future crisis and is using QIP to strengthen RM processes. They also agreed that ICT is an integral part of ERM process in the facility and the cascading RM downward happening, some experienced respondents were cautions to agree that both strategies are being implemented.

7.7 Summary of the chapter

Table 7.1.: Summary of key findings

Research questions	Research findings
Secondary questions	
What is enterprise risk management?	Enterprise risk management is an approach of managing risks in an integrated was across the discipline including all managers in different levels and organisation’s stakeholders.
What are the criteria used to assess the effectiveness of enterprise risk management?	ERM benchmark and efficiency indicators can be used as criteria to assess the effectiveness of enterprise risk management
What are the critical success factors for effective enterprise risk management procedures?	Regular training , communication, provision of sufficient resources and stakeholder management are identified as critical success factors for effective enterprise risk management implementation
What was the impact of the COVID-19 risk management strategy on	COVID-19 risk management strategy had positive impact on XYZ PHC’s performance, risk management awareness and processes and increased plight of mental health during crisis.

the XYZ PHC's performance?	
How can the XYZ PHC's enterprise risk management strategy be improved to better cope with future risks like COVID-19?	<p>The following mechanisms were identified as the strategies to improve current ERM practices in the facility.</p> <ul style="list-style-type: none"> • Cascading risk management to all levels of the organisation • Updating and testing facility Crisis-preparedness • Integrating Information and communication technology in Risk management practices • Using Quality improvement plan to improve in Risk management practices

(Source: self-complied by author)

Table 7.1 Summarised of key findings from quantitative research by linking them to the research questions. These findings will be analyse in the following chapter.

7.9 Conclusion

This chapter was focused on presenting and analysis research results from quantitative data, linking them with literature, theory and qualitative data. The discussions highlighted effectiveness of the risk management process used to develop the COVID-19 risk management strategy at the XYZ PHC facility quantitatively. The next chapter will focus on integrating and reporting data of the research.

Chapter 8: Data integration

8.1 Introduction

The main focus of this chapter is to integrate analysed research findings. Data integration at the interpretation and reporting level involved presenting the main findings from quantitative and qualitative data side-by-side and reporting these findings in a narrative form. The primary objective of this study is to evaluate the effectiveness of the risk management process utilised in formulating the COVID-19 risk management strategy at the XYZ PHC facility. Secondary research objectives were the following: (a) To explore and define the concept and components of enterprise risk management, (b) To identify and examine the criteria commonly employed to assess the effectiveness of enterprise risk management, (c) To investigate and determine the critical success factors that contribute to the effectiveness of enterprise risk management procedures, (d) To assess and analyse the impact of the COVID-19 risk management strategy on the XYZ PHC facility's performance.

8.2 Data integration and discussion of research participants and respondents

8.2.1. Enterprise risk management experience

Qualitative: Experienced staff: Majority of the participants were middle managers, representing their units in RM committee of the XYZ PHC facility, they reported high level of experience in ERM in the XYZ PHC facility.

The CEO appointed me as the secretary of the risk management committee, since I'm also secretary of quality assurance committee as well as, he thought their core functions are interrelated" (participant AH09)

Quantitative: Good ERM experience among respondents: A total of 70,4% of the respondents reported to have a moderate level of RM experience and 22,2% had a high level of experience in ERM as well.

Outcomes: Confirmation – The quantitative data showed that staff at the XYZ PHC facility have fairly good RM experience and while the qualitative data confirmed these findings.

Discussion: The findings highlighted that majority of middle and top staff in the XYZ PHC facility have fairly good ERM experience and are involved in ERM activities.

Implications: The XYZ PHC facility has a strong RM culture that ensures that risks are managed in an integrated way.

8.3 Understanding of enterprise risk management

Qualitative: Good understanding of ERM definition: majority of participants reported ERM as managing risks in an integrated way with multidisciplinary team.

COVID- 19 showed us we need each other, the risks were so interrelated and overlapping that it forced us to work as team, I mean for example lack of donning and doffing area (infrastructure risks) (contributed to high infection incidents at the beginning '(Participant AHO4)

Quantitative: Good understanding of ERM definition – Approximately 66,5% of the respondents either agreed with the statement that they have a good understanding of ERM.

Outcomes: Confirmation – The quantitative data showed that the respondents' level of ERM is good, while the qualitative data confirmed these findings and with only respondent with low RM and less than five work experience still struggling with the concept.

Discussion: Surprisingly, 22,2% of respondents expressed no opinion at all regarding the statement, but 65% of respondents said they understood this hospital's risk management procedures and activities well. 75% of respondents with little to no expertise in risk management and those with fewer than five years of work experience strongly disagreed with the statement and hence need training in risk management.

Implications: The staff at XYZ PHC are well-versed in the definition of Enterprise Risk Management (ERM), which is described in the literature review as an all-encompassing method of risk management that entails a thorough analysis of risks that are evaluated, quantified, funded, and managed at the corporate level.

8.4 Enterprise risk management processes

8.4.1 Objective setting

Qualitative: Alignment of organisation goals and ERM – Most of participants stated that risks are aligned to departmental and facility's strategic objectives during ERM meetings. This step connects the organisation's ERM with its facility's strategic objectives.

"COVID-19 pandemic became strategic and high risk because it impacted on all three risks categories of facility, organisational, resources and compliance risks but most importantly it affected our staff and patients, so our core business was risk, we needed effective mitigation plan that will work." (Participant AH 013).

Quantitative: Alignment of ERM and facility's goals: The majority of respondents (74.1%) concurred that the facility clearly defines and communicates its levels of risk tolerance or limits for all significant risks.

Outcomes: Confirmation: The quantitative data confirms that ERM is aligned with facility goals as indicated by participants in qualitative interviews that ERM is align to departmental and facility strategic objectives.

Discussion: The XYZ PHC facility had to deal with a variety of COVID-19 risks from both internal and external sources. This ERM component was necessary in order to effectively identify events, assess risks, and respond to those risks. The results showed that goal-setting enabled the facility to become a dedicated COVID-19 site from a general district hospital, even if the facility's risk category needed to adjust to reflect its new mission.

Implications: By aligning ERM objectives with the responsibilities of a designated COVID-19 site, the XYZ PHC facility has been able to better meet the needs of both patients and stakeholders.

8.4.2 Internal environment

Qualitative: Functional ERM committee provided structure and discipline: The purpose of ERM meetings was to analyse and offer ideas for improvement regarding the effectiveness of the facility's risk management systems, policies, procedures, and plan. Weekly ERM committee meetings were reported by all research participants during the COVID-19 pandemic.

“Screening was done at all entries without fail until fatigue and complacent set in during the four wave, patients were then referred appropriately according to assessment and level of evaluation from to risk assessment, some patients were sent to quarantine site, while other were sent to different level of care according to diagnosis, risk factors, prognosis, resources and referral routes and expertise.” (Participant AH06)

Quantitative: Conducive internal environment for ERM – Most respondents (77,8%) concurred that during the COVID-19 pandemic, senior management set the tone and conveyed the significance of risk management.

Outcomes: Confirmation – The majority of respondents confirmed that senior management sets the tone and communicates the importance of RM in the facility. The quantitative data shows that participants reported that ERM meetings were used to set the organization's tone and influence the risk consciousness of its people regarding ERM.

Discussion: Factors within the internal environment include the organisation's risk management culture, structure and communication skills and role and responsibilities. The finding from literature reviews shows that the ERM committee's term of reference able the facility able to set a conducive RM in the facility. Furthermore, the findings that ERM committee meeting allowed different stakeholders to played their role and ensure that the XYZ PHC facility is risk averse, which confirms that the facility has a good risk culture.

Implications: The XYZ PHC facility has a conducive internal environment for ERM.

8.4.3 Event identification

Qualitative: Event identification occurs regularly: risk identification is conducted in ERM meeting using risk registers with different stakeholders. Continuous risk identification included facility risks assessment and medical surveillance of staff which are part of occupational health and safety measures.

“We looked at departmental objectives and goals and develop risks from them we viewed COVID-19 risks as emerging risks in our risk registers, until it impacted negatively on our operations on daily basis, then it came top strategic risk.” (Participant AHO07)

Quantitative: Comprehensive event identification: The vast majority of respondents (81.5%) concurred that the facility detects possible occurrences that could compromise the entity's capacity to accomplish its goals.

Outcomes: Confirmation: The quantitative data confirmed that event identification was conducted in the facility, while qualitative interviews shows it involved different units and stakeholders and also included risks assessment and medical surveillance.

Discussion: The findings show that the facility's event identification involved of internal and external stakeholders confirms that the XYZ PHC facility assess internal and external brought by these stakeholders. External risk may come from cultural, political, legal, social, religious c aspects of the organisation's operating environment and internal risks include facility factors such as infrastructure, personnel, processes, and technology.

Implications: The XYZ PHC facility has comprehensive event identification, which allows it to plan better for the future crises.

8.4.4 Risk assessment

Qualitative: Continuous risk assessment – The majority of the participants reported that risks were reported on facility's risk register on quarterly basis, and new or emerging risks were assessed and evaluated against the departmental and facility's strategic objective using risk matrix and heat map tools.

“We looked at departmental objectives and goals and develop risks from them. We viewed COVID-19 risks as emerging risks in our risk registers, until it impacted negatively on our operations on daily basis, then it came top strategic risk.” (Participant AHO07)

Quantitative: Effective risk assessment: Eighty-one percent of respondents agreed that the facility regularly conducts a formalised risk assessment approach.

Outcomes: Confirmation: The quantitative data showed that the respondents agreed with risk champions that risk assessment is performed on regular basis in the facility.

Discussion: The findings highlighted risk assessment is performed in the facility and are classified in different risk categories.

Implications: The XYZ PHC facility performs formalised risk assessment that informs the risk mitigation plan.

8.4.5 Risks response

Qualitative: Risk reduction strategy used: Facility based COVID-19 command team met on weekly basis to prepare for district and provincial meeting, where the COVID-19 based the different information or reports are reviewed

using decision matrix and quality improvement plan tools to assess progress of mitigation plan. Some of research participants reported that they got more information from the floor (operations) and the experts on the difficult cases during the crisis.

Quantitative: Appropriate risk strategy: The majority of responders (65,5%) concurred that my hospital chooses the best risk response strategy—either avoiding, minimising, sharing, or accepting the risks—for each risk event.

Outcomes: Discordance: The majority of research participants stated that the XYZ PHC facility only employs a reduction strategy as a risk response option, but the quantitative data demonstrated that respondents agreed that my hospital chooses the best risk response option—avoidance, reduction, sharing, or acceptance of the risks—for each risk event.

Discussion: Although the majority of respondents (65,5%) agreed that my hospital chooses the best risk response option—avoiding, decreasing, sharing, or accepting the risks—for each risk event, the findings indicate that the facility has determined its risk response.

Implications: XYZ PHC facility's staff are expected to have a mitigation plan that helps reduce all identified risks, but prioritises the high and strategic risks of the facility.

8.4.6 Control activities

Qualitative: Effective control measure: weekly meeting was used to assess the effectiveness of COVID-19 management plan. Majority of the participants reported that they were part of the reviews meeting that ensure control measures for COVID-19 pandemic.

Quantitative: Effective control measures – The majority of respondents (90,8%) concurred that the facility's control operations include steps to be taken to address the risks the organisation faces.

Outcomes: Confirmation – The majority of respondents (90,8%) concurred that the facility's control activities involve taking steps to address the risks the organisation faces; nevertheless, the qualitative data only supported the weekly performance of these control and review activities.

Discussion: The rules and procedures put in place to guarantee that management's risk responses are carried out successfully are referred to as control activities. According to COSO ERM 2004:60–66, control activities include asset security, reviews of operational performance, authorizations, verifications, reconciliations, and segregation of roles. The outcomes verify that the facility implemented control measures throughout the pandemic.

Implications: The XYZ PHC facility has a standard control mechanism to review the effectiveness of an ERM mitigation plan.

8.4.7 Information and communication

Qualitative: Effective communication plan: Risk communication incorporates stakeholder engagement and leveraging information from all to reduce uncertainty and reduce spread of infections. The majority of the participants shared that communication was glue to the COVID-19 Risk Management Strategy,

“WhatsApp was the most used communication methods, we did meeting, teaching, tracking of patients and reports on that platform, while virtual meetings were conducted among managers and relevant stakeholders.” (Participant AH13)

Quantitative: Effective communication plan: The vast majority of responders (80,2%) concurred that the facility had a procedure in place that allowed staff members to report risk events that might have happened or have happened within their purview.

Outcomes: Expansion – The qualitative data revealed that ICT was used a surveillance and communication tools, while the majority of the respondents also showed it was used as reporting tool as well.

Discussion: ICT used in the facility usually provide historical data. ICT used during COVID-19 provided historical and live data that help with efficient decision-making process and improves RM in the facility.

Implications: The XYZ PHC facility has to migrate to live ICT system to able to have effective and efficient ERM systems in the future.

8.4.8 Monitoring

Qualitative: Effective monitoring and review activities – Weekly meetings by provincial COVID-19 provincial committee provided guidance on policies, guidelines, SOP as well as advise on clinical and management issues based on epidemiological reports, while the district COVID-19 command team localises the plans for effective implementation while looking at the available resources within the district.

“We used guidelines that were applicable to the facility (us), we reviewed and use them. We looked at our own situation (data, trends, experience, resources, skills, etc.) on the floor on daily basis to make necessary changes, sometimes weekly provincial COVID-19 meeting took too long make decision, so we use our allocated public health Medicine to maximum effect, we abuse her a lot, which helped.” (Participant AH13)

Quantitative: Effective monitoring – Most respondents (68,5%) concurred that regular continuing monitoring of all risk-related activities is carried out.

Outcomes: Confirmation – The quantitative data showed that there is ongoing monitoring of risks that include weekly, monthly and quarterly meeting, while the qualitative data confirmed monitoring include situation on the floor and epidemiological reports,

Discussion: The results showed that most respondents agreed that monitoring is continuing in the facility, while risk champions confirmed that monitoring was stepped up throughout the epidemic.

Implications: The XYZ PHC facility intensified monitoring activities during the pandemic.

8.5 Critical success factors of effective enterprise risk management

8.5.1 Stakeholder involvement

Qualitative: Active stakeholder engagement: Research participants indicated that a diverse range of stakeholders were involved in developing and managing COVID-19 infection in the XYZ PHC facility. The majority of risk champions reported a vital role that many stakeholders played in COVID-19 management

“We work with provincial team, district COVID-19 committee, facility management, UFS, IPC, EHP, Municipality. UFS and WHO provided us with help from the beginning of the pandemic, otherwise it was the blind leading the blind.” (Participant AHO15)

Quantitative: Effective stakeholder management: The facility effectively coordinated with its stakeholders to manage the risk of COVID-19, according to 79.6% of respondents.

Outcomes: Expansion – The quantitative data indicated that respondents thought the facility handled stakeholders well during the pandemic, but the participants demonstrated that key stakeholders went above and above by providing guidance and assistance to the facility personnel in creating a COVID-19 risk management plan.

Discussion: The quantitative data confirmed that the facility had effective stakeholder engagement with different roles players, while the qualitative data showed an important role and expertise that stakeholders brought in the facility. They help the facility to conduct to develop medical surveillance and infection control program as well as mentoring the facility managers in leading during crisis.

Implications: The XYZ PHC facility used available expertise and knowledge from the stakeholders to improve their RM process.

8.5.2 Communication

Qualitative: Increased usage of ICT as a communication method: During the COVID-19 epidemic, all research participants attested to a rise in the use of technology for communication.

“It was crucial as no contact was encouraged, more digital friendly ways of communication and information sharing were made available and shared. It improved communication and introduced new technology in the facility.” (Participant AH10)

Quantitative: Effective risk communication strategy: The facility's communication approach was deemed clear and effective in supporting COVID-19 risk management by the majority of responders (90,4%).

Outcomes: confirmation: The use of smart technologies to communicate with all stakeholders and improve the decision-making process regarding a COVID-19 risk management plan was revealed by the qualitative data, while

the quantitative data indicated that most respondents agreed that the facility's communication strategy was clear and effective in support of COVID-19 risk management.

Discussion: The results demonstrated how smart technologies may enhance ERM procedures and fortify successful risk communication tactics.

Implications: Smart technologies have important role to play in effective risk communication strategies

8.5.3 Resources

Qualitative: Availability of sufficient resources: Resources are typically exhausted during crises and emergencies since there are more people affected and resources needed to handle the situation. According to the participants, the hospital possessed adequate resources to oversee the patients.

“Management must avail sufficient resources on time like they did during COVID-19 and remove Red tape, see how public health sector will improve performance drastically.” (Participant AH13)

Quantitative: Availability of sufficient resources: Ninety-seven percent of the responders agreed that the institution provided resources for managing the COVID-19 epidemic.

Outcomes: Confirmation: Data from both quantitative and qualitative analysis verify that the institution provided resources to control the COVID-19 pandemic.

Discussion: Resource risk allocation is an important of managing pandemic and strengthening ERM processes during crisis.

Implications: Availability of sufficient resources improves the chance of ERM effectiveness.

8.5.4 Training

Qualitative: Positive change management: Participants expressed positive experience with training programme during COVID-19 pandemic.

COVID-19 was a blessing, I m a better manager now, I learnt a lot, how to handle complex and confusing situation without my supervisor support always beside me” (Participant AH 10).

Quantitative: Learning organisation – Most responders (85,2%) concurred that having regular training enabled the business to be informed about developments and information related to the COVID-19 pandemic.

Outcomes: Confirmation. The pandemic kept the facility informed and allowed for organisational learning, according to the quantitative data, while the training improved employee and organisational outcomes, according to the qualitative data.

Discussion: The findings confirms that training played an important role in changing organisational culture to adapt to the pandemic.

Implications: Regular training helped to improve individual and organisational change to improve ERM processes.

8.6 Impact of the COVID-19 risk management strategy on performance

8.6.1 Impact on XYZ PHC facility' performances

Qualitative: Sense of achievement: The majority of participants expressed satisfaction and pride in the manner the XYZ PHC facility handled the COVID-19 epidemic despite anxiety and uncertainty.

“Yes, our facility did excellently - yes, because we reduce mortality and morbidity.” (Participant AH7)

Quantitative: Positive outcome – 86,1% of the respondents were in agreement that the COVID-19 risk management strategy improved the performance of the organisation.

Outcomes: Confirmation – Both quantitative and qualitative data agreed that the COVID-19 Risk Management Strategy enabled the facility to achieve its goals.

Discussion: The results demonstrate that the COVID-19 Risk Management Strategy improved the organization's performance.

Implications: Effective ERM improved chance of the XYZ PHC facility achieving its goals.

8.6.2 Awareness of enterprise risk management

Qualitative: Advocacy of ERM – Some of the participants reported that before COVID-19 pandemic, they didn't understand importance of ERM and disaster planning in improving facility outcomes.

Quantitative: Increased ERM profile – The majority of respondents (94,5%) concurred that the hospital's risk management procedures and awareness were enhanced by the way the COVID-19 outbreak was handled.

Outcomes: Confirmation: Both quantitative and qualitative data indicated that the hospital's risk management procedures and awareness were enhanced by the way the COVID-19 outbreak was handled.

Discussion: The results demonstrate that interest in and awareness of ERM within the facility are sparked by the COVID-19 epidemic.

Implications: The COVID-19 pandemic improved ERM awareness in the facility.

8.7 Evaluation of effectiveness of enterprise risk management implementation

8.7.1 Efficiency indicators

Qualitative: Monitoring tool for ERM – Most of the participants stated that they tracked the development and efficacy of guidelines and protocols using performance indicators from the units.

Quantitative: Monitoring tool for ERM – Most respondents (79,6%) concurred that hospital targets, or efficiency indicators, were used to assess the efficacy of COVID-19 risk management.

Outcomes: Confirmation – Hospital targets (efficiency indicators) were used to assess the efficacy of COVID-19 risk management, according to both quantitative and qualitative data.

Discussion: The efficacy of COVID-19 risk management was assessed using hospital targets (efficiency indicators), according to both quantitative and qualitative data.

Implications: The XYZ PHC facility used efficiency indicators to evaluate COVID-19 risk management effectiveness monthly.

8.7.2 Enterprise risk management benchmarks

Qualitative: According to the majority of participants, risk management benchmarks were utilised to assess the efficacy of controls.

Quantitative: The reviews tool of ERM – The majority of respondents (83,4%) concurred that risk management benchmarks were used to assess the efficacy of COVID-19 risk management.

Outcomes: Confirmation, Risk management standards were used to assess the efficacy of COVID-19 risk management, according to both quantitative and qualitative data.

Discussion: The effectiveness of COVID-19 risk management was assessed using risk management benchmarks, according to both quantitative and qualitative data.

Implications: The XYZ PHC facility used risk management benchmarks to evaluate COVID-19 risk management effectiveness quarterly.

8.8 Best practices: outlines the main themes that arose from the examination of the interview data and the findings of the correspondence survey study.

8.8.1 Quality improvement plan

Qualitative: Quality assurance: A majority of participants indicated the facility should continue to quality improvement plan (QIP) to strengthen the effectiveness of ERM in the facility.

Quantitative: Quality assurance – The facility is strengthening its risk management procedures through the use of quality improvement plans, according to the majority of respondents (92,6%).

Outcomes: Confirmation – The quantitative data showed that the facility is using quality improvement plans to strengthened risk management processes, while the qualitative data confirmed these findings and advise that the practice should continue in the future.

Discussion: The QIP is a quality assurance tool to improve service provision in the facility, thus the finding suggests that quality assurance will be integrate in ERM processes to improve its effectiveness

Implications: The XYZ PHC facility should use Quality assurance tools to improve its processes or its effectiveness.

8.8.2 Information and communication technology

Qualitative: Live (interactive) ICT – The majority of the participants reported positively on the value that live-based technology has on a strategy.

“Technology was the backbone of the COVID-19 Risk Management Strategy. We had to adapt faster or die. Even though some managers were born before technology, it helps to integrate different stakeholder expectations into one cohesive vision. Even though sometimes we had problems with connectivity in the facility (“You, this place is rural mos.” (Participant AHO1)

Quantitative: live (interactive) ICT: The majority of the respondents (76,0%) agreed that the facility is integrating Information and Communication Technologies in risk management practices.

Outcomes: Confirmation – The quantitative data showed that the facility is the facility is integrating Information and Communication Technologies in risk management practices, while the qualitative data confirmed these findings but that technology must live and smart to able improve processes to allow for effective and efficient decision-making process in ERM.

Discussion: The findings highlighted the importance of effective and efficient ICT in improving ERM processes.

Implications: The XYZ PHC facility should integrate smart and interactive ICT in its ERM processes to improve its effectiveness

8.8.3 Cascading downwards

Qualitative: Involvement of lower category staff: During interviews, some of the participants reported cascading risk management practices to lower level of staff improved staff buy in and improved staff morale and energy.

“Cascading risks downward made everyone feel like family, it strengthens compliance of protocols and guidelines especially with the cleaners.” (Participants AHO5)

Quantitative: Involvement of lower category staff: The majority of the respondents (72,2%) agreed that the facility is committed to cascading risk management to lower levels.

Outcomes: Confirmation: The quantitative data showed that the majority of the respondents believe that the facility is committed to cascading risk management to lower levels, while the qualitative data confirmed that cascading risk downwards improved staff morale and facility’s results.

Discussion: The findings highlighted the importance of valuing each stakeholder's contribution and expectations during the process of the internal environment. All internal stakeholders should be actively involved in ERM activities in the facility.

Implications: The XYZ PHC facility should include lower categories (staff) in ERM activities in improve risk assessment on the floor.

8.8.4 Mental health awareness

Qualitative: Mental health crisis – Some of the participants reported that they experienced mental stress due to constant pressure from treating severely ill patients without sufficient PPE and vaccinations, as well as experiencing a high level of stress due to the loss of close colleagues.

“The impact was bad at first and we were afraid to get infected, but as most staff became positive and not die we carried on, without psychological help. We built immune for it.” (Participant AH09)

Quantitative: Mental health crisis: The majority of the respondents (72,2%) agreed that the way in which the COVID-19 pandemic was managed increased awareness of mental health management during crisis.

Outcomes: Confirmation: The quantitative data confirm that the way in which the COVID-19 pandemic was managed increased awareness of mental health management during crisis, while the qualitative data confirmed mental health was issue during the pandemic.

Discussion: The findings highlighted the importance of mental health issues during the pandemic.

Implications: The XYZ PHC facility should include mental health as part of medical surveillance for all stakeholders and patients.

8.8.5 Crisis-preparedness plan

Qualitative: Proper planning (preparedness – All research participants reported that the lessons learnt during COVID-19 prepared them for future crises.

Quantitative: Proper planning (preparedness) – The majority of the respondents (88,8%) agreed that the facility is well prepared to manage future risks as a result of lessons learnt on managing COVID-19 crises.

Outcomes: Confirmation – Both the quantitative and qualitative data confirm that the facility is well prepared to manage future risks as a result of lessons learnt on managing COVID-19 crises.

Discussion: The findings highlighted the importance of organisational culture in change management and organisational learning especially during a crisis.

Implications: The XYZ PHC facility should include change management as part of objective setting element of ERM process.

Summary: The qualitative and quantitative data showed that ERM elements are present and functioning in the facility and the process used to develop the COVID-19 Risk Management Strategy was effective.

8.9. Summary of findings regarding primary and secondary research questions

Table 8.1. Summary of findings regarding primary & secondary objectives.

Objectives	Research Questions	Qualitative findings	Quantitative findings	Outcomes (expansion, confirmation , discordance)	Findings
Primary objective					
To evaluate the effectiveness of the risk management process utilised in formulating the COVID-19 risk management strategy at the XYZ PHC facility.	How effective was the risk management process used to develop the COVID-19 risk management strategy at the XYZ PHC facility?	Most of the participants stated that risk management used to develop COVID-19 risk management strategy at XYZ PHC facility was effective	98% of respondents indicated that the way Covid-19 pandemic was managed improved RM processes in the facility	Expansion: results showed that RM used was effective and also improved RM in the facility	Risk management used to formulate the COVID-19 risk management strategy at the XYZ PHC facility was effective.
Secondary objectives Covid-19 RM strategy					

<p>To explore and define the concept and components of enterprise risk management</p>	<p>What is enterprise risk management?</p>	<p>Majority of participants said that ERM is about managing risks in an integration way rather than in silo or individually basis</p>	<p>69 % of respondents indicated that they have a good understanding of ERM and activities in the facility</p>	<p>Confirmation: most staff at XYZ PHC facility understand the concept and definition of ERM.</p>	<p>XYZ PHC facility's staff has the understanding of ERM that is found in literature review. Department of Health uses ERM benchmark to assess its ERM strategy effectiveness on quarterly basis.</p> <p>During COVID-19 pandemic, XYZ PHC facility used efficiency indicator to monitor and reviewed its ERM effectiveness on weekly and monthly basis and ERM benchmark on quarterly basis.</p>
<p>To identify and examine the criteria commonly employed to assess the effectiveness of enterprise risk management</p>	<p>What criteria are used to assess the effectiveness of enterprise risk management?</p>	<p>Participants reported that of the XYZ PHC facility used ERM benchmark and efficiency indicators to assess the effectiveness of the ERM.</p>	<p>85 % of respondents indicated that the effectiveness of Covid-19 RM strategy was evaluated using efficiency indicators while additionally 81% of respondents believe that the effectiveness of Covid-19 RM strategy was evaluated using efficiency ERM benchmark</p>	<p>Confirmation: ERM benchmark and hospital efficiency indicators as the main tools to assess the effectiveness of enterprise risk management in the facility</p>	<p>There is no standard way to assess the effectiveness of enterprise risk management.</p> <p>XZY PHC facility used two tools to evaluate ERM implementation .</p>

<p>To investigate and determine the critical success factors that contribute to the effectiveness of enterprise risk management procedures</p>	<p>What are the critical success factors for effective enterprise risk management procedures?</p>	<p>Regular trainings, availability of resources, communication and stakeholder management were reported by participants as critical success factors for effective ERM implementation.</p>	<ul style="list-style-type: none"> • 94 % of respondents indicated that availability of resources was critical for effective ERM implementation • 92% of respondents indicated that clear and simple communication supported effective ERM implementation • 87% of respondents indicated that regular trainings were critical for effective ERM implementation • 83 % of respondents indicated that that stakeholders engagement strengthen effective ERM implementation 	<p>Confirmation: availability of resources, training and clear communication strategy are critical success factors for ERM implementation</p> <p>Discordance: None of the literature reviewed listed stakeholder’s engagement as critical success factors for effective ERM implementation.</p>	<p>Four critical success factors were identified for effective ERM implementation in the facility</p>
--	---	---	--	---	---

To assess and analyse the impact of the COVID-19 risk management strategy on XYZ PHC's performance	What was the impact of the COVID-19 risk management strategy on XYZ PHC's performance?	Majority participants reported positive impact of COVID-19 risk management on the XYZ PHC facility's performance	92 % of respondents indicated that Covid-19 RM strategy had positive impact of the organisation performance.	Confirmation: Covid-19 RM strategy had positive impact on facility's goals and improved RM processes and awareness.	Covid-19 RM strategy helped XYZ PHC facility to be fully functioning hospital by increasing its bed occupancy rate, head counts and resources.
To develop recommendations and strategies to enhance XYZ PHC's enterprise risk management approach in order to effectively handle future risks, particularly those similar to COVID-19	How can XYZ PHC's ERM strategy be improved to better cope with future risks like COVID-19?	Majority of participants reported that cascading risk to lower levels and using quality assurance tool will improve ERM in the facility .	72 % of respondents believe that XYZ PHC facility is committed to cascading risks management to lower levels and about 92% of respondents confirms that XYZ PHC facility is using quality improvement plans to strengthen ERM.	Confirmation: QIP's and cascading risks management to lower levels are strategies identified to enhance ERM implementation.	QIP 's and cascading risks management to lower levels are identified as strategies to strengthen ERM implementation

Table 8.1 above displays summary of finding regarding primary and secondary objectives. It identified insights from combined data and provided a broader and more comprehensive interpretation of participants' responses and the research problem.

8.10. Conclusion

The integration of data confirms that RM process used to develop COVID-19 RM strategy was effective and the element of EMS are present and functioning in the facility. Four critical success factors were identified for effective ERM implementation, while cascading ERM downwards and using quality improvement plan's tools and interactive ICT will strengthen ERM processes. The next chapter will focus on the conclusion and summary of this research study, limitations and recommendations for further research.

Chapter 9: Conclusion, strengths, limitations and recommendations

9.1 Introduction

This study investigated the effectiveness of the risk management process used to develop a COVID-19 risk strategy at the XYZ Public Health Care facility. This chapter provides a summary of key conclusions, research limitations and recommendations. Things have changed from the time when the South African President declared a state of disaster on 15 March 2020 as a measure to curb the spread of the infection in the country. The XYZ PHC facility faced a significant number of COVID-19-related challenges during the first wave of the pandemic, which impacted negatively on its performance and brand in the catchment area. During the subsequent waves, things seemed to improve due to the processes that were implemented to strengthen ERM effectiveness.

9.2 Key observations

9.2.1. Enterprise Risk management experience

Risk management utilized to formulate the COVID-19 risk management strategy at the XYZ PHC facility was effective due to various factors, but one of the significant factors was its employees' level of risk management experience and their intensive involvement in risk management activities during the pandemic. For example, about 70.4% of the respondents considered themselves moderately experienced in risk management and another 22.2% regarded themselves highly experienced. Additionally, the research participants stated that the facility used to hold weekly enterprise risk committee meetings to discuss the COVID-19 risk management plan progress and activities. The vast majority (92.2%) of the respondents were on middle management positions, thus they had fairly good experience of management. Good risk management experience and practices might have contributed to improve the RM processes in the facility.

9.2.2. Enterprise risk management approach

ERM is viewed as a framework for effectively addressing uncertainty and associated risks and opportunities, thereby enhancing an organisation's capacity to create value. It is a top-down process influenced by the organisation's governance structure, management and personnel, and is applied across the enterprise in strategic settings (COSO 2004). At the XYZ PHC facility, ERM was viewed and operated as an approach of managing risks in an integrated manner across the disciplines including all employees at different levels and its stakeholders. The ERM approach used was interactive and involved all stakeholders impacted by the organisation actions. The approach was bottom-up, which helped to generate a lot of ideas and intervention for the crisis.

9.2.3 Enterprise risk management process: monitoring

The eight pillars of ERM are as follows: objective setting, internal environment, event identification, risk assessment, risk response, control activities, information and communication and monitoring. According to the Department of Health's ERM policy, the facility risk management committee must monitor the implementation and effectiveness of the risk management function on a quarterly basis. Its action plan should be reviewed on an annual basis. One of the observations was that the XYZ PHC facility used its own timelines, where monitoring

was performed on weekly and monthly bases and reviewing on a quarterly basis, which seemed to work perfectly during the pandemic. These shorter periods allowed for the facility staff and management to focus on the urgent and immediate solutions as well as preventative interventions to curb the disease during the pandemic.

9.2.4. Enterprise risk management process: control activities

The control activities step of the ERM process focuses on identifying and evaluating the controls in place for prioritised risks, as well as assessing the effectiveness of these control measures. Some of the control measures in the Department of Health are policies, guidelines and protocols to guide processes and systems that usually take time to be developed and approved. During the pandemic, weekly meetings by the provincial COVID-19 committee provided guidance on policies, guidelines, SOP as well as advised on clinical and management issues based on epidemiological reports, thus reducing red tape and improving implementation efficacy. The district COVID-19 command team also helped to localise the ERM plans for effective implementation by looking at the available resources within the district and providing support when it was needed. These measures as well as the contribution from the UFS and WHO experts helped to strengthen ERM implementation in the facility.

9.3 Limitations of this research

In as much as this research has strengths, there are limitations as well. The limitations of this research are as follows:

9.3.1. Lack of corroboration of research findings

The views of the provincial and district COVID-19 command committee members were excluded; there was a lack of corroboration of research findings. The findings were based on responses from the XYZ PHC facility staff without provincial and district members as well as the external stakeholders who formed part of the COVID_19 risk management strategy implementation in the facility and district, thus the findings were one-sided. The views of the provincial and district COVID-command members may corroborate the reports of risk champions regarding the processes and effectiveness of risk management used in the XYZ PHC facility.

9.3.2. Inability to generalise findings

The goal of the qualitative research was to provide a rich, contextualised understanding of a particular human phenomenon. In the context of this particular research, the results cannot be generalised to the Department of Health's facilities population, but should go to the facility where the study was conducted. The findings of the quantitative analysis were also from the XYZ PHC facility population, thus both are related to the facility rather than the whole department.

9.4. Recommendations

9.4.1 Recommendations for the XYZ PHC facility

Owing to the comprehensive nature of the enterprise risk program, a few suggestions and recommendations are discussed below to enhance the ERM plan in the facility in line with the research findings.

9.4.1.1) Training of employees on the concepts of ERM

Even though the majority of employees have a good understanding of enterprise risk management, about 22% of the respondents with low RM experience and less than 5 years' work experience were undecided, and 7% in middle management positions admitted they did not understand it. Therefore, the researcher recommends that training be provided on ERM concepts to these target groups. The majority of participants expressed positive experiences with the training program during the COVID-19 pandemic regarding risk management, and 85.2% of respondents agreed that regular training helped the organisation to keep up to date with changes and information during the COVID-19 pandemic, therefore even this target group is likely to benefit and receive the training well.

9.4.1.2) Communication strategy

About 90% of employees viewed clear and effective communication to have supported the facility's COVID-19 risk management plan. Utilising smart technologies and social media seemed to have helped in mitigating risks during the pandemic, thus the researcher proposed continuous use of smart e-technology to improve ERM communication in the facility. The aim of risk communication is to advance risk awareness and understanding, as well as promote health-protective behaviour among individuals. Risk communication is an essential part of risk mitigation measures since it drives the public understanding, trust, acceptance and compliance with the measures. The role of technology has emerged and is of great importance in emergency management, especially for risk communication. Risk mitigation is an interdisciplinary decision-making process based on information from risk and exposure assessment.

9.4.1.3) Monitoring risk management effectiveness using efficacy indicators

The results of this research indicated that the monitoring and reviewing of RM during the COVID-19 pandemic were done on short intervals using live (interactive) ICT or smart technologies that helped to enhance the performance of the facility during the pandemic. The research also showed that efficacy indicators can be used to monitor risk management on monthly and weekly bases. The efficacy indicators should include performance reports from units, management by working, risk assessment, medical surveillance, health and safety and HR to be able to provide a comprehensive performance status of a facility. The researcher proposes that efficacy indicators be used to monitor risk management effectiveness in the facility on a monthly basis.

9.4.1.4) Reviewing risk management effectiveness using risk management benchmarks

The research showed that risk management benchmarks were used to review risk management effectiveness on a quarterly basis. About 83% of the respondents agreed that the facility was evaluated using COVID-19 risk

management. The researcher recommends that the facility changes its standard operation protocol to maintain reviews to be conducted on a quarterly basis rather than annually so that the facility would be able to respond to a changing environment swiftly.

9.4.1.5) An integrated employee wellness programme with risk management

The results of this research indicated that the risk management plan should include employee wellness intervention to care for the staff during pandemic. Very many reported cases of mental health were due to institutional factors such as lack of resources (PPE and vaccination), HR issues (overtime and absenteeism), psychological factors (anxiety, fear, colleagues' deaths) and system issues (referral and disaster). According to De Simone (2014), employees with poor welfare are less productive, make low-quality decisions, are more prone to absenteeism at work and consistently reduce overall contributions to the organisation.

Employee wellness programmes contribute positively by improving employee experience at the workplace, thereby influencing organisational commitment and contributing to organisational performance. It plays an important role in the sustainability of organisations and individuals within the organisation. Organisations with an employee wellness programme show positive business results such as increased employee retention, productivity and psychological well-being, among a variety of other benefits. The researcher recommends that a risk management plan should include an employee wellness programme to cater for the mental health of employees in the facility.

9.4.1.6) Crisis preparedness plan

A new facility such as the XYZ PHC facility needs to test its risk management plans regularly to ensure that they remain viable and are adequately positioned to ensure that the facility functions optimal to service its clients' needs as well as to ensure that its organisational structure is improved and modified regularly for a safe future (Hua et al. 2020). Updating and testing the facility's crisis-preparedness plan should be done on a quarterly basis in order to prepare the organisation for any pending crisis. About 88.8% of 40.7% of the respondents agreed that the XYZ PHC facility is well-prepared to manage future risks as a result of lessons learnt on managing the COVID-19 crisis.

9.4.1.7) Critical success factors for effective ERM implementation.

Regular training, effective communication and provision of sufficient resources were identified as main critical success factors for effective enterprise risk management at the XYZ PHC facility during the pandemic. The researcher recommends that the standard operating procedure is amended to include this factor as part of the facility ERM strategy.

The availability of resources enhances ERM implementation by improving planning and decision making. It helps organizations to enhance its productivity and efficacy. About 88.8% of the respondents (50%) agreed that the XYZ PHC facility made resources available for risk management during COVID-19 and the majority of participants believed that availability of resources during the COVID-19 pandemic helped to improve performance drastically.

9.4.2. Strategies to strengthen ERM:

Strategies to strengthen ERM include the following factors:

9.4.2.1) Cascading risk to lower levels of the facility

This research highlights the importance of integrating risk management to all levels of responsibility or management within an organisation. A fully integrated ERM programme should also include operational risks faced by lower levels of staff on a daily basis, thus an integrated and live ICT will help to cascade risks to different levels of the organisation.

The literature review in Chapter 2 highlighted integration of risks at organisational level. The top-down approach of centralised ERM decision-making at the facility level through the ERM committee discourages participation of lower structures and lower categories of staff. By cascading risk to lower levels of the facility will enhance its organisational contexts and allow the facility to understand its environment better, which will lead to better goal setting and improve patient satisfaction. Actively involving staff who have less than 5 years' experience in the facility will improve their RM experience and understanding of ERM concepts, which leads to more buy-in and improve future preparedness.

9.4.2.2) Quality improvement plan

The quality improvement plan is the XYZ PHC facility's framework for improving systems and processes to increase the chances of achieving organisational outcomes. A quality improvement plan is normally developed after the root cause of the problem had been identified. It is a living document that should be reviewed and updated regularly to instil the culture of learning and continuous improvement within the facility. The facility's mitigation strategy can use the PDCA process that comprises four steps, namely, plan, do, check and act to develop the mitigation plan. Reviewing and reporting of risk management activities can be done quarterly in ERM committee and quality assurance meetings.

9.4.2.3) Multi-sectoral planning for ERM (stakeholder engagement)

The findings showed that multi-sectoral planning involving different stakeholders is the practical way to tackle crises and to have effective risk mitigation plans. Multi-sectoral planning and risk mitigation plans with representatives from different sectors can help the facility to prepare for complex chains of decisions and consequences. This multi-sectoral planning cooperation, collaboration and agreement between facility and different stakeholders should be strengthened to prepare for future pandemics.

9.4.2.4) Integrating a live (interactive) information and communication system in the RM process

ERM aims to provide a comprehensive approach to management of risk. It supports an entity-wide approach to risk management, which means that every key risk in each part of the department must be included in a structured and systemic way. The findings highlighted that using interactive ICT in the facility helped to direct ERM processes such as risk assessment, reviewing, reporting and monitoring of results and adjusting controls to optimise

achieving facility objectives. If used properly ICT can provide a structure and fracture for effective ERM processes. Interactive ICT will ensure that immediate and historical data that comes from different sources (community and facility) are integrated and classified according to set priorities for effective decision making during different processes of ERM. Interactive ICT will also help to detect changing and emerging trends and ensure a smooth transition from planning to the recovery phase of disaster and different processes of ERM. By using interactive ICT at all levels, managers at different levels will be accurately informed and support effective strategic and tactical decisions regarding facility goals and outcomes.

9.4. 3. New framework for enterprise risk management

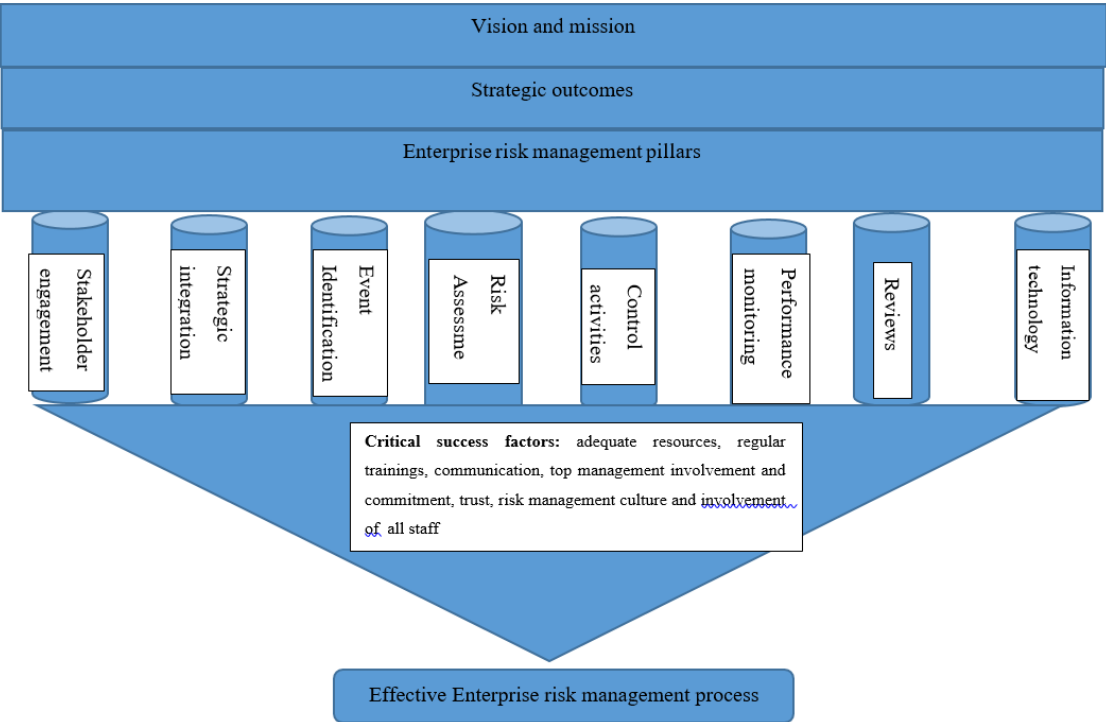


Figure : 9.1. Proposed XYZ PHC facility ERM framework.

Proposed ERM framework based on literature reviews and findings from both qualitative and quantitative questions is proposed in figure 9.1. The initial step is to identify and understand the purpose of the organisation as well as its vision. The vision and mission of the facility will provide foundation for organisational goals or outcomes. This strategy goals are developed based on the organisational strategies and resources. Enterprise risk management’s role is to support the strategic goals of the facility and increase the chance of the facility reaching its goals.

The proposed enterprise risk management framework has 8 pillars linked to critical success factors to improve ERM effectiveness. The 8 pillars of the proposed ERM framework (figure 9.1) are discussed below:

- *Stakeholder engagement:* It's the planning and designing pillar of the proposed ERM framework. It involves providing structure, system, people, discipline and the ERM policy and strategy. It is a multi-disciplinary forum with both internal and external stakeholders.
- *Strategic integration:* This pillar involves integrating strategic goals and decision-making processes of the facility with the ERM procedures and activities. It will help integrate the ERM action plan into the facility's annual performance plan.
- *Event identification:* It involves a continuous ERM process that identifies risks and opportunities. It will help to identify the top ten risks of the facility in line with the strategic goals.
- *Risk assessment:* This pillar assesses risks on a risk matrix based on their likelihood of occurrence and their potential impact and all management action should aim to reduce risks.
- *Control activities:* Implementing and integrating policies and procedures are to ensure an effective risk response. Quality improvement plans should be used to help develop effective management plans in the facility.
- *Performance monitoring:* This pillar involves monitoring goals of the facility using efficacy indicators to assess progress toward achieving the facility's goals.
- *Reviews:* This pillar involves reviewing risk action plans and strategy using risk benchmarks to assess effective ERM implementation.
- *Information and communication Technologies:* Integrating information and communication technologies in risk management. Utilising ICT to monitor new and emerging risks as well as sending alerts of early warning signs.

With the literature reviews, critical success factors were studied to check whether they have an enhancement effect on the effectiveness of the enterprise risk management implementation. Eight critical success factors (Figure 9.1) were identified to strengthen effective ERM.

9.5. Recommendation for further research

9.5.1. Triangulation of research results by interviewing health professionals

The limitation of this research is based on the fact that there is a lack of corroboration of research results, as other stakeholders were not interviewed. This research was focused on the views of the XYZ PHC staff regarding the effectiveness of the risk management process used to develop a COVID-19 risk strategy at the XYZ Public Health-care facility. Future research should use triangulation to establish corroborating evidence. The views of district COVID-19 members regarding risk management processes used to develop a COVID-19 risk strategy can be explored.

9.5.2. *A longitudinal study to track the enterprise risk management behaviour*

The findings of this research revealed that the XYZ PHC facility conducted an effective risk management process during the pandemic that risk management should be cascaded down using a quality improvement plan to be fully integrated. The question that is pertinent, however, is, how effective is efficacy indicators in monitoring the effectiveness of RM. Further research should hence focus on whether efficacy indicators can be used to assess effectiveness of RM on a monthly rather than on a quarterly basis using risk management benchmarks in the XYZ PHC facility. A longitudinal study is proposed to track effectiveness of RM using efficacy indicators in the XYZ PHC facility.

9.6. Summary of recommendations:

Table: 9.1. Summary of recommendations:

Objectives	Questions	Recommendations
Secondary objectives	Secondary questions	
To gain an understanding of enterprise risk management	What is enterprise risk management?	Expansion of definition: ERM is viewed and operated as an approach of managing risks in an integrated manner across the disciplines including all employees at different levels and its stakeholders. The ERM used were interactive and involved all stakeholders impacted by the organisation's actions. Training of employees on ERM concepts
To explore the criteria used to assess the effectiveness of enterprise risk management	What are the criteria used to assess the effectiveness of enterprise risk management?	Use of efficacy indicators and risk benchmarks to assess the effectiveness of ERM implementation
To evaluate the critical success factors for effective enterprise risk management procedures	What are the critical success factors for effective enterprise risk management procedures?	Regular training, effective communication, provision of sufficient resources and stakeholder management were identified as main critical success factors for effective enterprise risk management at the XYZ PHC facility
To develop recommendations and strategies to enhance the XYZ PHC facility's enterprise risk management	How can the XYZ PHC facility's enterprise risk management strategy be improved to better cope with future risks like COVID-19?	The following mechanisms were identified as the strategies to improve current ERM practices in the facility. <ul style="list-style-type: none"> • Cascading risk management to all levels of the organisation

<p>approach in order to effectively handle future risks, particularly those similar to COVID-19.</p>		<ul style="list-style-type: none"> • Integrating live (interactive) information and communication system in the RM process • Multi-sectoral planning for ERM • Using a quality improvement plan to strengthen ERM implementation. • Testing and updating the facility 's crisis preparedness • Integrating employee wellness programmes with risk management
--	--	---

(Source: self-complied by author)

Table 9.1 above displays a summary of the final recommendations of the study.

9.7. Conclusion

This chapter discussed very important points relating to the strengths and limitations of this research. Recommendations were based on the effectiveness of the enterprise risk management at the XYZ PHC facility to ensure that the facility is able to maintain its key mandate. Recommendations on future research are related to tracking the effectiveness of RM using efficacy in the XYZ PHC facility, thereby enabling integration of performance management and risk management daily and improving the importance of RM to enhance performance in the facility.

References

- Abidin, H. Z., Rasid, S. Z. A., Khalid, H., Basiruddin, R. & Baskaran, S. (2019). Effectiveness of Enterprise Risk Management Practices: A Case Study. *Business Management and Strategy*, 10(2), 213-233.
- Abraham, S. E. (2012). Information technology, an enabler in corporate governance. *Corporate Governance: The International Journal of Business in Society*, 12(3), 281-291.
- Aggarwal, P. (2013). Impact of corporate governance on corporate financial performance. *IOSR Journal of Business and Management*, 13(3), 1-5.
- Al Maskari, Z., Al Blushi, A., Khamis, F., Al Tai, A., Al Salmi, I., Al Harthi, H., Al Saadi, M., Al Mughairy, A., Gutierrez, R. & Al Blushi, Z. (2021). Characteristics of healthcare workers infected with COVID-19: A cross-sectional observational study. *International Journal of Infectious Diseases*, 102, 32-36.
- Al-Tamimi, H. A. H. & Al-Mazrooei, F. M. (2007). Banks' risk management: a comparison study of UAE national and foreign banks. *Journal of Risk Finance*, 8(4), 394-409.
- Arnaboldi, M. & Lapsley, I. (2014). Enterprise-wide risk management and organizational fit: a comparative study. *Journal of Organizational Effectiveness: People and Performance*, 11(25).
- Arnold, V., Benford, T., Canada, J. & Sutton, S. G. (2011). The Role of Strategic Enterprise Risk Management and Organizational Flexibility in Easing New Regulatory Compliance. *International Journal of Accounting Information Systems*, 12(3), 171-188.
- Asanati, K. (2020). How COVID-19 has made occupational health services indispensable. Retrieved March 14, 2022, from <https://www.rcplondon.ac.uk/news/how-COVID-19-has-made-occupational-health-services-indispensable>.
- Ashour, H. M., Elkhatib, W. F., Rahman, M. M. & Elshabrawy, H. A. (2020). Insights into the Recent 2019 Novel Coronavirus (SARS-CoV-2) in Light of Past Human Coronavirus Outbreaks. *Pathogens*, 9(3), 186.
- Aven, T. & Renn, O. (2009). On risk defined as an event where the outcome is uncertain. *Journal of Risk Research*, 12, 1-11.
- Baxter, B. (2013). Enterprise risk management: the challenges and benefits of implementing ERM. Retrieved March 14, 2022, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3748267.
- Beasley, M. S., Clune, R. & Hermanson, D. R. (2005). Enterprise risk management: An empirical analysis of factors associated with the extent of implementation. *Journal of Accounting Public Policy*, 24(6), 521-531.
- Bekefi, T., Epstein, M. J. & Yuthas, K. (2008). Managing opportunities and risks. *CMA Canada*.
- Bernard, R. H. (2012). *Social research methods: Qualitative and quantitative approaches* (2nd ed.). Thousand Oaks, CA: Sage.

- Biddle, C., & Schafft, K. A. (2015). Axiology and anomaly in the practice of mixed methods work: Pragmatism, valuation, and the transformative paradigm. *Journal of Mixed Methods Research*, 9, 320-334. <https://doi.org/10.1177/1558689814533157>
- Bielicki, J. A., Duval, X., Gobat, N., Goossens, H., Koopmans, M., Tacconelli, E. & Van der Werf, S. (2020). Monitoring approaches for health-care workers during the COVID-19
- Bourne, L. (2009). Stakeholder relationship management. A maturity model for organisational implementation. Farnham: Gower.
- Bowling, D. M. & Rieger, L. A. (2005). Success factors for implementing enterprise risk management. *Bank Accounting & Finance*, 18(3), 21-6.
- Brazer, P.J. (2011). Institutional capacity of the South African Police Service for disaster risk reduction in the Dr Kenneth Kaunda district municipality (Doctoral dissertation, North-West University).
- Bromiley, P. & Rau, D. (2016). A better way of managing major risks: Strategic risk management. *IESE Insight*, 28, 15-22.
- Bromiley, P., McShane, M., Nair, A. & Rustambekov, E. (2015). Enterprise risk management: Review, critique, and research directions. *Long Range Planning*, 48(4), 265-276.
- Brown, I., Steen, A. & Foreman, J. (2009). Risk management in corporate governance: A review and proposal. *Corporate Governance: An International Review*, 17(5), 546-558.
- Bruwer, J. P. (2013). The need for a customized risk management framework for small enterprises. Paper presented at the Biennial Conference of the Southern African Accounting Association, Somerset West, 26-28 June, pp. 999-1030.
- Bryman, A., Bell, E., Hirschsohn, P., Dos Santos, A., Du Toit, J., Masenge, A., Van Aardt, I. & Wagner, C. (2019). *Research methodology: Business and management contexts*. Cape Town: Oxford University Press.
- Burns, J.K., 2011. The mental health gap in South Africa: A human rights issue. *The Equal Rights Review*, 6(99), pp.99-113.
- Cambridge Dictionary. (2022). Procedure. Retrieved June 8, 2022, from <https://dictionary.cambridge.org/dictionary/english/procedure>.
- Cameron, K. S. & Whetten, D. (1996). Organizational Effectiveness and Quality: The Second Generation. *Higher Education-New York-Agathon Press Incorporated*, 11, 265-306.
- Carey, A. (2001). Effective risk management in financial institutions: The Turnbull approach. *Balance Sheet*, 9(3), 24-27.

- Campbell, S.M., Roland, M.O. & Buetow, S.A. (2000). Defining quality of care. *Social science & medicine*, 51(11), 1611-1625.
- Cendrowski, H. & Mair, W. C. (2009). *Enterprise risk management and COSO: A guide for directors, executives and practitioners*. John Wiley & Sons.
- Chen, Y. H., Glymour, M., Riley, A., Balmes, J., Duchowny, K., Harrison, R., Matthay, E. & Bibbins-Domingo, K. (2021). Excess mortality associated with the COVID-19 pandemic among Californians 18-65 years of age, by occupational sector and occupation: March through November 2020. *PLoS One*, 16(6), e0252454.
- Ciocoiu, C. N. & Dobreă, R. C. (2010). The Role of Standardization in Improving the Effectiveness of Integrated Risk Management. *Advances in Risk Management*, 1-18.
- Clarke, V. & Braun, V. (2013). *Successful qualitative research: A practical guide for beginners*. London: Sage.
- Clark, V.L.P. and Ivankova, N.V., 2015. *Mixed methods research: A guide to the field* (Vol. 3). Sage publications.
- Clutterbuck, D. & Hirst, S. (2002). Leadership communication: A status report. *Journal of Communication Management*, 6(4), 351-354.
- Collier, P. M., Berry, A. J. & Burke, G. T. (2007). *Risk and Management Accounting: Best Practice Guidelines for Enterprise-Wide Internal Control Procedures*. Oxford: CIMA Publishing/Elsevier.
- Collins Dictionary. (2022). Risk factor. Retrieved March 14, 2022, from <http://www.collinsdictionary.com/us/dictionary/english/risk> factor.
- Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2004). *Enterprise Risk Management – Integrated Framework*. Retrieved August 22, 2022, from <http://www.coso.org/SitePages/Home.aspx>.
- Committee of Sponsoring Organizations of Treadway Commission (COSO). (2004). *Enterprise Risk Management - Integrated Framework- Executive Summary*. Retrieved March 14, 2022, from <https://www.coso.org/Documents/COSO-ERM-Executive-Summary.pdf>.
- Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2017). *Enterprise Risk Management: Integrating with Strategy and Performance*. New York: American Institute of Certified Public Accountants. Retrieved August 22, 2022, from <https://www.coso.org/Shared%20Documents/2017-COSO-ERM-Integrating-with-Strategy-and-Performance-Executive-Summary.pdf>.
- Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2017). *Enterprise Risk Management: Integrating with Strategy and Performance -Executive Summary*. Retrieved March 14, 2022, from <https://www.coso.org/Documents/2017-COSO-ERM-Integrating-with-Strategy-and-Performance-Executive-Summary.pdf>.

- Creswell, J.W., 1999. Mixed-method research: Introduction and application. In *Handbook of educational policy* (pp. 455-472). Academic press.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Creswell, J.W. (2003). A framework for design. *Research design: Qualitative, quantitative, and mixed methods approaches, 2003*, pp.9-11.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. New York, NY: Sage.
- Creswell, J. W. (2008). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: SAGE Publications.
- Creswell, J. W. (2011). *Planning, conducting, and evaluating quantitative and qualitative research*. New York: Pearson.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage publications.
- Creswell, J. W. & Plano-Clark, V. L. (2011). Choosing a mixed methods design. In *Designing and conducting mixed methods research* (2nd ed., pp. 53-106).
- Dafikpaku, E. (2011). The strategic implications of enterprise risk management (ERM): a framework. In *Proceedings of the 2011 Enterprise Risk Management Symposium by the Society of Actuaries* (Vol. 48), Chicago.
- D'arcy, S.P. & Brogan, J.C. (2001). Enterprise risk management. *Journal of Risk Management of Korea*, 12(1), pp.207-228
- Dieronitou, I. (2014). The Ontological and epistemological foundations of qualitative and quantitative approaches to research. *International Journal of Economics, Commerce, and Management*, 2(10). Retrieved from <http://ijecm.co.uk/volume-ii-issue-10/>
- De La Rosa, S. (2007). Moving forward with ERM. *Internal Auditor*, June, 50-54. Retrieved August 8, 2022, from <https://iaonline.theiia.org/>.
- De Pablo, G. S., Vaquerizo-Serrano, J., Catalan, A., Arango, C., Moreno, C., Ferre, F., Shin, J. I., Sullivan, S., Brondino, N., Solmi, M. & Fusar-Poli, P. (2020). Impact of coronavirus syndromes on physical and mental health of health care workers: Systematic review and meta-analysis. *Journal of Affective Disorders*, 275, 48-57.

Deloitte Canada. (2012). Dico webinar: The five components of an effective ERM framework. Retrieved March 15, 2022, from http://www.deloitte.com/view/en_CA/ca/services/enterprise-risk/governance-risk/2e2e85606be88310VgnVCM1000001956f00aRCRD.html.

Demidenko, E. & McNutt, P. (2010). The ethics of enterprise risk management as a key component of corporate governance. *International Journal of Social Economics*, 37(10), 802-815. doi:10.1108/03068291011070462.

Department of Health. (2016). HPCSA guidelines for good practice in the health care profession. General ethical guidelines for the health care profession. Retrieved August 28, 2022, from https://www.ru.ac.za/media/rhodesuniversity/content/ethics/documents/nationalguidelines/HPCSA_guidelines_for_good_practice_in_the_healthcare_professions_researchers_booklet.pdf.

Department of Health. (2018). Risk management strategy. Retrieved May 28, 2022, from <https://www.health.wa.gov.au/About-us/Policy-frameworks/Risk-Compliance-and-Audit/Mandatory-requirements/WA-Health-Risk-Management-Policy>.

Department of Health. (2020a). Clinical management of suspected or confirmed COVID-19 disease (version 3). Retrieved February 15, 2022, from https://www.westerncape.gov.za/assets/departments/health/FP/clinical_management_of_suspected_or_acute_COVID-19_version_3_compressed.pdf.

Department of Health. (2020b). Interim guidance: Guidelines for symptoms monitoring and management of workers for SARS-COV-2 infection. Retrieved February 28, 2022, from https://nj.gov/health/cd/topics/COVID2019_healthcare.shtml.

Department of Health. (2020c). Provincial referral policy. Retrieved May 23, 2022, from https://health.gov.za/wp-content/uploads/2020/11/policy-wbphcot-4-april-2018_final-copy.pdf.

Department of Health. (2021/21). Risk management policy. Retrieved May 28, 2022, from <https://www.health.wa.gov.au/About-us/Policy-frameworks/Risk-Compliance-and-Audit/Mandatory-requirements/WA-Health-Risk-Management-Policy>.

Department of Statistics. (2011). Census 2011 Community Profile Database (GIS CD). Retrieved August 28, 2022, from <https://census2011.adrianfrith.com/place/416>.

DeSantis, L. & Ugarriza, D. N. (2000). The concept of theme as used in qualitative nursing research. *Western Journal of Nursing Research*, 22(3), 351-372.

Dornberger, K., Oberlehner, S., Zadrazil, N. (2014). Challenges in implementing enterprise risk management. *ACRN Journal of Finance and Risk Perspectives*, 3(3), pp. 1-14

El-Boghdadly, K., Wong, D.J.N., Owen, R., Neuman, M.D., Pocock, S., Carlisle, J.B., Johnstone, C., Andruszkiewicz, P., Baker, P.A., Biccard, B.M. and Bryson, G.L. (2020). Risks to healthcare workers following tracheal intubation of patients with COVID-19: a prospective international multicentre cohort study. *Anaesthesia*, 75(11), pp.1437-1447.

Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K. & Kyngäs, H. (2014). Qualitative content analysis: A focus on trustworthiness. *SAGE Open*, 4(1), 2158244014522633.

Ennouri, W. (2013). Risks management: New literature review. *Polish Journal of Management Studies*, 8(1), 291.

Environmental Protection Agency. (2016). Human Health Risk Assessment. Retrieved August 8, 2022, from <https://www.epa.gov/risk/human-health-risk-assessment>.

Erdem, H. & Lucey, D. R. (2021). Healthcare worker infections and deaths due to COVID-19: a survey from 37 nations and a call for WHO to post national data on their website. *Int J Infect Dis*, 102, 239-41.

Ernst & Young. (2001). 2001 risk management guide from theory to practice: Evolving your organization's risk management. Insurance and Actuarial Advisory Services.

Fakhrudin, B.S., Blanchard, K. & Ragupathy, D. (2020). Are we there yet? The transition from response to recovery for the COVID-19 pandemic. *Progress in Disaster Science*, 7, p.100102.

Ferdosi, M., Rezayatmand, R. & Taleghani, Y. M. (2020). Risk management in executive levels of healthcare organizations: Insights from a scoping review. *Risk Management and Healthcare Policy*, 13, 215-243.

Feroli, M., Cisternino, C., Leo, V., Pisani, L., Palange, P. & Nava, S. (2020). Protecting healthcare workers from SARS-CoV-2 infection: Practical indications. *Eur Respir Rev*, 29, 200068.

Fishman, D. B. (1991). An introduction to the experimental versus the pragmatic paradigm in evaluation. *Evaluation and Program Planning*, 14(4), 353-363.

Free State Province. (2018/19). Risk Management Strategy. Pretoria: Government Printers.

Free State Province. (2020). Provincial Referral Policy. Pretoria: Government Printers.

Freund, Y. P. (1988). Planner's guide Critical Success Factors. *Planning Review*, 16(4), 20-23.

Fusch, P.I. & Ness, L.R. (2015). Are we there yet? Data saturation in qualitative research. *Qual Rep*. 2015; 20 (9): 1408.

Fusco, F.M., Pisaturo, M., Iodice, V., Bellopede, R., Tambaro, O., Parrella, G., Di Flumeri, G., Viglietti, R., Pisapia, R., Carleo, M.A. & Boccardi, M. (2020). COVID-19 among healthcare workers in a specialist infectious diseases setting in Naples, Southern Italy: results of a cross-sectional surveillance study. *Journal of Hospital Infection*, 105(4), pp.596-600.

Gabor, M. R. (2010). Descriptive methods of data analysis for marketing data - Theoretical and practical considerations. *Management and Marketing*, 5(3), 119-134.

- Gates, S., Nicolas, J. L. & Walker, P. L. (2012). Enterprise risk management: A process for enhanced management and improved performance. *Management Accounting Quarterly*, 13(3), 28-38.
- Gatzert, N. & Schmit, J. (2016). Supporting strategic success through enterprise-wide reputation risk management. *Journal of Risk Finance*, 17(1), 26-45. <https://doi.org/10.1108/JRF-09-2015-0083>
- Gómez-Ochoa, S. A., Franco, O. H., Rojas, L. Z., Raguindin, P. F., Roa-Díaz, Z. M., Wyssmann, B. M., Guevara, S. L. R., Echeverría, L. E., Glisic, M. & Muka, T. (2021). COVID-19 in health-care workers: A living systematic review and meta-analysis of prevalence, risk factors, clinical characteristics, and outcomes. *American Journal of Epidemiology*, 190(1), 161-175.
- González, L. O., Santomil, P. D. & Herrera, A. T. (2020). The effect of enterprise risk management on the risk and the performance of Spanish listed companies. *European Research on Management and Business Economics*, 26(3), 111-120.
- Gordon, L. A., Loeb, M. P. & Tseng, C. Y. (2009). Enterprise risk management and firm performance: A contingency perspective. *Journal of Accounting and Public Policy*, 28(4), 301-327.
- Governance, R. (2005). Towards an integrative approach. *International Risk Governance Council*, Geneva, Switzerland.
- Grabowski, M. & Roberts, K. (1999). Risk mitigation in virtual organisations. *Organisational Science*, 10(6), 704-722.
- Grace, M. F., Leverty, J. T., Phillips, R. D. & Shimpi, T. (2015). The value of investing in enterprise risk management. *Journal of Risk and Insurance*, 82(2), 289-316.
- Greene, J.C., Caracelli, V.J. and Graham, W.F., 1989. Toward a conceptual framework for mixed-method evaluation designs. *Educational evaluation and policy analysis*, 11(3), pp.255-274.
- Guest, G., Bunce, A. & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1), 59-82. <https://doi.org/10.1177/1525822X05279903>
- Hall, R. (2013). Mixed methods: In search of a paradigm. *Conducting research in a changing and challenging world*, pp.71-78.
- Hathcoat, J.D., Meixner, C. (2017). Pragmatism, factor analysis, and the conditional incompatibility thesis in mixed methods research. *Journal of Mixed Methods Research*, 11(4), pp.433-449.
- Halliday, S., Badenhorst, K. & Solms, R. V. (1996). A business approach to effective information technology risk analysis and management. *Information Management & Computer Security*, 4(1), 19-31.
- Hart, C. (1998). *Doing a Literature Review Releasing the Social Science Research Imagination*. London: Sage.

- Hasanali, F. (2002). Critical success factors of knowledge management. Retrieved from http://www.kmadvantage.com/docs/km_articles/Critical_Success_Factors_of_KM.pdf on August 28, 2022.
- Hameed, B.Z., Tanidir, Y., Naik, N., Teoh, J.Y.C., Shah, M., Wroclawski, M.L., Kunjibettu, A.B., Castellani, D., Ibrahim, S., da Silva, R.D. & Rai, B. (2021). Will “hybrid” meetings replace face-to-face meetings post COVID-19 era? Perceptions and views from the urological community. *Urology*, 156, pp.52-57
- Hesse-Biber, S.N. (2010). *Mixed methods research: Merging theory with practice*. Guilford Press.
- Hofstede, G. (2001). *Culture’s Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations* (2nd ed.). London: Sage Publications.
- Hoyt, R. E. & Liebenberg, A. P. (2011). The value of enterprise risk management. *Journal of Risk and Insurance*, 78(4), 795-822.
- HSA. (2017). Healthy, safe and productive lives. Hazard and risk. Retrieved from <http://www.hsa.ie/eng/Topics/Hazards/> on March 29, 2022.
- Hua, J., & Shaw, R. (2020). Coronavirus (Covid-19) "infodemic" and emerging issues through a data lens: The case of China. *International journal of environmental research and public health*, 17(7), 2309.
- Impouma, B., Mboussou, F., Farham, B., Wolfe, C. M., Johnson, K., Clary, C., Mihigo, R., Nsenga, N., Talisuna, A., Yoti, Z., Flahault, A., Keiser, O., Gueye, A. S., Cabore, J. & Moeti, M. (2021). The COVID-19 pandemic in the WHO African region: the first year (February 2020 to February 2021). *Epidemiology and Infection*, 149, e263.
- Institute of Directors Southern Africa (IoDSA). (2016). King IV Report on corporate governance for South Africa 2016. Retrieved from <http://www.iodsa.co.za/?page=KingIV> on June 20, 2022.
- International Organization for Standardization. (2009). Guide 73:2009 Risk Management: Vocabulary. Geneva, Switzerland: ISO.
- International Organization for Standardization. (2009). ISO 31000:2009 Risk Management: Principles and Guidelines. Geneva, Switzerland: ISO. Retrieved from www.iso.org on August 28, 2022.
- IPENZ. (1983). Engineering Risk, report of the President’s task committee on Professional Practice and Risk. Wellington, New Zealand: Institution of Professional Engineers New Zealand.
- ISO 31000: Risk Management. (n.d.). International Organization for Standards, Geneva, Switzerland. Retrieved from <https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100426.pdf>.
- ISO 31000: Risk Management. (n.d.). International Organization for Standards, Geneva, Switzerland. Retrieved from <https://www.iso.org/standard/65694.html> on June 25, 2022.

ISO. (2008). Risk management principles and guidelines on implementation. Retrieved from <https://www.iso.org/iso-31000-risk-management.html/> on June 25, 2022.

ISO. (2009). 31000: 2009 Risk management Principles and Guidelines. Sydney, NSW: International Organization for Standardization. Standards Association of Australia. Retrieved from <https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100426.pdf>.

ISO. (2009). 31000: 2009 Risk management Principles and Guidelines. Sydney, NSW: International Organization for Standardization. Standards Association of Australia. Retrieved from <https://www.iso.org/standard/43170.html> on June 25, 2022.

Ivankova, N. V. (Stick, S.L. (2002). Students' persistence in the distributed doctoral program in educational administration: A mixed methods study. Paper presented at the 13th International Conference on College Teaching and Learning, Jacksonville, FL.

Jalal, A., AlBayati, F.S. and AlBuainain, N.R., 2011. Evaluating enterprise risk management (ERM); Bahrain financial Sectors as a case study. *International Business Research*, 4(3), p.83.

Jalal-Karim, A. (2013). Leveraging enterprise risk management (ERM) for boosting competitive business advantages in Bahrain. *World Journal of Entrepreneurship, Management and Sustainable Development*, 9(1), 65-75.

James, W. (2000). What pragmatism means (from pragmatism). In J. J. Stuhr (Ed.), *Pragmatism and Classical American Philosophy: Essential Readings and Interpretive Essays* (pp. 193-202). New York, NY: Oxford University Press.

Jassat, W., Karim, S. S. A., Mudara, C., Welch, R., Ozougwu, L., Groome, M. J., Govender, N., von Gottberg, A., Wolter, N., Wolmarans, M. & Rousseau, P. (2022). Clinical severity of COVID-19 in patients admitted to hospital during the omicron wave in South Africa: a retrospective observational study. *The Lancet Global Health*, 10(7), e961-e969.

Javaid, M. I. & Iqbal, M. M. W. (2017, April). A comprehensive people, process and technology (PPT) application model for Information Systems (IS) risk management in small/medium enterprises (SME). In *2017 International Conference on Communication Technologies (ComTech)* (pp. 78-90). IEEE.

Johnson, R. B., Onwuegbuzie, A. J. (Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1, 112-133. <https://doi.org/10.1177/1558689806298224>

King, N. (2004a). Essential guide to qualitative methods in organizational research. Retrieved from <https://dx.doi.org/10.4135/9781446280119> on June 12, 2022.

King, N. (2004b). Using templates in the thematic analysis of text. Retrieved from <https://dx.doi.org/10.4135/9781446280119> on February 12, 2022.

- Kjurchiski, N. (2014). Public Administration Efficiency in Resource Economies. Available at SSRN 2440725.
- Kleffner, A. E., Lee, R. B. & McGannon, B. (2003). The effect of corporate governance on the use of enterprise risk management: evidence from Canada. *Risk Management and Insurance Review*, 6(1), 53-73.
- Korstjens, I. & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120-124. PMID:29202616
<https://doi.org/10.1080/13814788.2017.1375092>
- Kumar, S.& Rao, P. (2015). A conceptual framework for identifying financing preferences of SMEs. *Small Enterprise Research*, 22(1), pp.99-112.
- Lai, A.Y.H. & Tan, S.L. (2015). Impact of disasters and disaster risk management in Singapore: A case study of Singapore's experience in fighting the SARS epidemic (pp. 309-336). Springer Japan.
- Laisasikorn, K. & Rompho, N. (2014). A Study of the Relationship Between a Successful Enterprise Risk Management System, a Performance Measurement System and the Financial Performance of Thai Listed Companies. *Journal of Applied Business and Economics*, 16(2), 81.
- Lan, F. Y., Filler, R., Mathew, S., Buley, J., Iliaki, E., Bruno-Murtha, L. A., Osgood, R., Christophi, C. A., Fernandez-Montero, A. & Kales, S. N. (2020). COVID-19 symptoms predictive of healthcare workers' SARS-CoV-2 PCR results. *PloS one*, 15(6), e0235460.
- Lebese, L., Begg, K., Dudley, L., Mamdoo, P., Engelbrecht, J. & Andrews, G. (2018). Development of a national strategic framework for a high-quality health system in South Africa. *South African health review*, 2018(1), pp.77-85
- Levine, R. (2004). Risk management system: Understanding the need. *Information System Management*. 21(2), 31-37.
- Lewis, M., Saunders, P. & Adrian, T. (2009). *Research Methods for Business Students*. Essex: Pearson.
- Lincoln, Y. & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills: Sage. Master, P. (1999). Editorial. *English for Specific Purposes*, 18, 102-104.
- Longman Dictionary of Contemporary English (2022). Available at <https://www.ldoceonline.com/dictionary/public-> [accessed August 8, 2022].
- Maarouf, H. (2019). Pragmatism as a supportive paradigm for the mixed research approach: Conceptualizing the ontological, epistemological, and axiological stances of pragmatism. *International Business Research*, 12(9), 1-12.

- Maltezou, H. C., Giannouchos, T. V., Pavli, A., Tsonou, P., Dedoukou, X., Tseroni, M., Papadima, K., Hatzigeorgiou, D., Sipsas, N. V. & Souliotis, K. (2021). Costs associated with COVID-19 in healthcare personnel in Greece: a cost-of-illness analysis. *Journal of Hospital Infection*, 114, 126-133.
- Manab, N., Othman, S. & Kassim, I. (2012). Enterprise-wide risk management best practices: The critical success factors. *OIDA International Journal of Sustainable Development*, 4(03), 87-96.
- Marshall, M. N. (1996). Sampling for qualitative research. *Family Practice*, 13(6), 522-526.
- Martins, B. & Solé, F. (2013). Roles-purpose-and-culture misalignments: A setback to bottom-up SME clusters. *Journal of Knowledge Management*, 17(4), 598-616.
- Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Forum Qual. Soc. Res.*, 11, 3:1-3:19.
- McAllister, D. J. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38(1), 24-59.
- McLeod, R. & Schell, G. P. (2004). *Management information system*. New Jersey 7458: Pearson Education.
- Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded from "Case Study Research in Education"*. Jossey-Bass Publishers, 350 Sansome St, San Francisco, CA 94104.
- Misra-Hebert, A. D., Jehi, L., Ji, X., Nowacki, A. S., Gordon, S., Terpeluk, P., Chung, M. K., Mehra, R., Dell, K. M., Pennell, N. & Hamilton, A. (2020). Impact of the COVID-19 pandemic on healthcare workers' risk of infection and outcomes in a large, integrated health system. *Journal of General Internal Medicine*, 35, 3293-3301.
- Mohrman, S. A. & Lawler, E. E., III. (2014). Designing organizations for sustainable effectiveness: A new paradigm for organizations and academic researchers. *Journal of Organizational Effectiveness: People and Performance*, 1(1), 14-34.
- Morgan, D. (2014). Follow-up quantitative extensions to qualitative research projects. In *Integrating Qualitative and Quantitative Methods: A Pragmatic Approach*. Sage Publications.
- Moshesh, R., Niemann, W. & Kotzé, T. (2018). Enterprise risk management implementation challenges: a case study in a petrochemical supply chain. *South African Journal of Industrial Engineering*, 29(4), 230-244.
- Mutsaers, E. J., Van der Zee, H. & Giertz, H. (1998). The evolution of information technology. *Information Management & Computer Security*, 6(3), 115-126.
- Na Ranong, P. & Phuenngam, W. (2009). Critical success factors for effective risk management procedures in financial industries: A study from the perspectives of the financial institutions in Thailand.

Nassaji, H. (2020). Good qualitative research. *Language Teaching Research*, 24(4), 427-431.

Natesan., Du Plessis . (2019). Why King IV's "apply and explain" is so important. Retrieved from [https://www.iodsa.co.za/news/news.asp?id=438882/Why King IV's "apply and explain" is so important](https://www.iodsa.co.za/news/news.asp?id=438882/Why%20King%20IV's%20%22apply%20and%20explain%22%20is%20so%20important) - The Institute of Directors in South Africa NPC (iodsa.co.za) on August 2022.

National Development Plan Vision for 2030. (2011). National planning commission, Republic of South Africa, Pretoria. Government Printers.

National Institute for Communicable Diseases. (2021). Proposed definition of COVID-19 wave in South Africa. Retrieved from <https://www.nicd.ac.za/wp-content/uploads/2021/11/Proposed-definition-of-COVID-19-wave-in-South-Africa.pdf> on August 12, 2022.

National Institute for Occupational Health. (2019). COVID-19 risk assessment guidelines for general workplace. Johannesburg: NIOH. Retrieved from [URL here] on August 8, 2022.

National Institute of Communicable Diseases (NICD). (2019). Public health center surveillance report. Retrieved from [URL here] on August 8, 2022.

National Institute of Communicable Diseases (NICD). (2021). COVID-19 Hospital Surveillance-Weekly Update on Hospitalized HCWs Update: Week 37, 2021. Retrieved from [URL here] on August 8, 2022.

National Treasury. (2010). Final risk management framework for the public sector. Pretoria: Government Printers.

National Treasury. (2021). Treasury regulations for departments, constitutional institutions, and public entities issued in terms of the Public Finance Management Act, 1999. Pretoria: Government Printers. Retrieved from https://www.treasury.gov.za/legislation/pfma/regulations/gazette_22219.pdf

NIST. (2004). Risk Management Guide for Information Technology Systems. National Institute of Standards and Technology. Retrieved from <http://csrc.nist.gov/publications/nistpubs/800-30/sp800-30.pdf>

Noble, H. & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-Based Nursing*, 18(2), 34-35.

NSW Department of State and Regional Development. (2005). Risk management guide for small business. Global Risk Alliance on the instruction of the New South Wales Department of State and Regional Development, NSW Department of State and Regional Development. Retrieved from www.smallbiz.nsw.gov.au on August 29, 2022.

Occupational Safety and Health Administration. (2020). Guidance on preparing workplaces for COVID-19. Retrieved from <https://www.osha.gov/Publications/OSHA3990.pdf> in July 2022.

Othman, S., Steen, M. & Fleet, J. A. (2020). A sequential explanatory mixed methods study design: An example of how to integrate data in a midwifery research project. *Journal of Nursing Education and Practice*, 11(2), 75.

Otieno, F.A.O. (2000, November). The roles of monitoring and evaluation in projects. In 2nd International Conference on Construction in Developing Countries: Challenges facing the construction industry in developing countries (pp. 15-17).

Oxfordreference.com. (2022). Retrieved from <https://www.oxfordreference.com/search?q=effectiveness&searchBtn=Search&isQuickSearch=true> on August 8, 2022.

Paape, L. & Speklé, R. F. (2012). The Adoption and Design of Enterprise Risk Management Practices: An Empirical Study. *European Accounting Review*, 21(3), 533-564.

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Sage Publications, Inc.

Ping, T.A. & Muthuveloo, R. (2015). The impact of enterprise risk management on firm performance: Evidence from Malaysia. *Asian Social Science*, 11(22), 149.

PriceWaterHouseCoopers. (2004). Enterprise wide risk management for the insurance Industry: Global study.: PriceWaterHouseCoopers. Retrieved June 13, 2022, from <http://www.pwcglobal.com>

Pope, C., Ziebland, S. & Mays, N. (2006). Chapter 7 Analysing qualitative data. In *Qualitative research in health care* (3rd ed.). Oxford: Blackwell Publishing Ltd.

Qobo, M. (2020). What it will take to build a capable state in South Africa. *The Conversation*, Braamfontein.

Rainer, L. E. N. Z. (2013). Insights into the effectiveness of internal audit: a multi-method and multi-perspective study. *SSRN Electronic Journal*. <http://dx.doi.org/10.2139/ssrn.2541580>

Renault, B. Y., Agumba, J. N. & Balogun, O. A. (2016). Drivers for and obstacles to enterprise risk management in construction firms: A literature review. Paper presented at the Creative Construction Conference, Budapest, 25-28 June, pp. 167-172.

Republic of South Africa (RSA). (1993). Occupational Health And Safety Act (85 of 1993). Pretoria: Government Printer. No. 377(14918).

Republic of South Africa (RSA). (1994). White Paper On Reconstruction And Development, 15 November. Pretoria: Government Printers. Retrieved from <https://www.gov.za/sites/default/files/governmentgazetteid16085.pdf> on June 24, 2022.

Republic of South Africa (RSA). (1999). The Public Finance Management Act, 1999 (Act 29 of 1999). Pretoria: Government Printers.

Republic of South Africa (RSA). (2019/24). Medium TERM Strategic Framework 2019-24, Department of Planning, Monitoring and Evaluation. Pretoria: Government Printer. No. 377(14918). Retrieved from <https://chm.cbd.int/api/v2013/documents/D165896D-9C67-5D84-5CA9-9E9E7C8615F0/attachments/Medium%20TERM%20Strategic%20Framework%202014-2019.pdf> on November 8, 2022.

Republic of South Africa (RSA). (2020). Disaster Management Act, 2002. Amendment of regulations issued in terms of section 27(2). Government gazette 398(43145).

Republic of South Africa. (1996). The Constitution of the Republic of South Africa Act. Pretoria: Government Printers.

Republic of South Africa. (2013). Protection of Personal Information Act No. 4. Pretoria: Government printers. Retrieved from https://www.gov.za/sites/default/files/gcis_document/201409/3706726-11act4of2013protectionofpersonalinforcorrect.pdf on August 18, 2022.

Resnik, D. (2023). Disclosing and managing non-financial conflicts of interest in scientific publications. *Research Ethics*, 19(2), pp.121-138.

Reusken, C. B., Buiting, A., Bleeker-Rovers, C., Diederens, B., Hooiveld, M., Friesema, I., Koopmans, M., Kortbeek, T., Lutgens, S. P., Meijer, A. & Murk, J. L. (2020). Rapid assessment of regional SARS-CoV-2 community transmission through a convenience sample of healthcare workers, the Netherlands, March 2020. *Eurosurveillance*, 25(12), p.2000334.

Richter, A., & Wilson, T.C. (2020). Covid-19: Implications for insurer risk management and the insurability of pandemic risk. *The Geneva Risk and insurance review*, 45(2), 171-199

Rittenberg, L., Martens, F. & Committee of Sponsoring Organizations of the Treadway Commission. (2012). Enterprise risk management: understanding and communicating risk appetite.

Rockart, J. F. (1979). Chief executives define their own data needs. *Harvard Business Review*, 57(2), 81-93.

Roland, H. (2008). Using IT to drive effective risk management. *Risk Management*, 55(1), 43.

Rossiter, C. (2001). REGULARS-CONTROL-Management-Risk culture--Up close and personal. *CA Magazine-Chartered Accountant*, 134(3), 45-46.

Rubino, M. (2018). A comparison of the main ERM frameworks: how limitations and weaknesses can be overcome implementing IT governance. *International Journal of Business and Management*, 13(12), 203-214.

Saeidi, P., Sofian, S., Rasid, S. Z. A. & Saeid, S. P. (2012). The role of chief risk officer in adoption and implementation of enterprise risk management—A literature review. *International Research Journal of Finance and Economics*, 88, 118-123.

- Santori, L., Bevan, K. & Myers, C. (2007). *Summary of Standard & Poor's enterprise risk management evaluation process for insurers*. Standard & Poor's, New York.
- Schlak, T. M. (2015). Social capital and leadership in academic libraries: The broader exchange around "Buy In". *Library Management*, 36(6/7), 394-407.
- Shah, A. S., Wood, R., Gribben, C., Caldwell, D., Bishop, J., Weir, A., Kennedy, S., Reid, M., Smith-Palmer, A., Goldberg, D. & McMenamin, J. (2020). Risk of hospital admission with coronavirus disease 2019 in healthcare workers and their households: Nationwide linkage cohort study. *BMJ*, 371.
- Shannon-Baker, P. (2016). Making paradigms meaningful in mixed methods research. *Journal of Mixed Methods Research*, 10, 319-334. <https://doi.org/10.1177/1558689815575861>
- Shaukat, N., Ali, D. M. & Razzak, J. (2020). Physical and mental health impacts of COVID-19 on healthcare workers: A scoping review. *International Journal of Emergency Medicine*, 13, 1-8.
- Shenkir, W. G. & Walker, P. L. (2006). *Enterprise risk management: Frameworks, elements, and integration*. Institute of Management Accountants.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22, 63-75.
- Sharman, R. (2002). Enterprise risk management – the KPMG approach. *Manager*, (31), 26.
- Simundic, A.M., 2013. Bias in research. *Biochemia medica*, 23(1), pp.12-15. Chapter 4: Qualitative research results
- Srivastava, N., Baxi, P., Ratho, R. K. & Saxena, S. K. (2020). Global trends in epidemiology of coronavirus disease 2019 (COVID-19). *Coronavirus Disease 2019 (COVID-19) Epidemiology, Pathogenesis, Diagnosis, and Therapeutics*, pp. 9-21.
- Standards Australia and Standards New Zealand. (2004). *Australia/New Zealand Standard Risk Management AS/NZS 4360:2004*. Retrieved July 28, 2022, from www.saiglobal.com
- State Bank of Pakistan (SBP). (2003). *Risk Management Guidelines for Commercial Banks & DFIs*. Retrieved March 24, 2022, from <http://www.sbp.org.pk/about/riskmgm.pdf>
- Talja, S. (1999). Analyzing qualitative interview data: The discourse analytic method. *Library & Information Science Research*, 21(4), 459-477.
- Tashakkori, A. & Teddlie, C. (1998). *Mixed methodology: combining qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.
- Theil, M. & Ferguson, W. L. (2003). Risk management as a process: An international perspective. *Review of Business*, 24(3), 30.

- Thompson, D.F. (1993). Understanding financial conflicts of interest. *New England journal of medicine*, 329, pp.573-573.
- Thorne, S., Stephens, J. & Truant, J. (2016). Building qualitative study design using nursing's disciplinary epistemology. *Journal of Advanced Nursing*, 72(2), 451-460.
- Tillinghast-TowersPerrin. (2002). Enterprise risk management in the insurance industry: 2002 benchmarking survey report. Retrieved March 24, 2022, from <http://www.tillinghast.com>
- Togok, S., Isa, C. R. & Zainuddin, S. (2014). Operationalising enterprise risk management (ERM) effectiveness. *Asian Journal of Accounting Perspectives*, 7(1), 28-48.
- Toyon, M. A. S. (2021). Explanatory sequential design of mixed methods research: Phases and challenges. *International Journal of Research in Business and Social Science (2147-4478)*, 10(5), 253-260.
- Vaismoradi, M., Jones, J., Turunen, H. & Snelgrove, S. (2016). *Theme development in qualitative content analysis and thematic analysis*.
- Veiss, S. D. (2012). Eficiența și eficacitatea în sectorul public (Efficiency and Effectiveness in the Public Sector). REGENT, Vol.13, No.3(36). Retrieved August 23, 2022, from http://www.recentonline.ro/036/Veiss_D-R36.pdf
- Walker, P.L., Shenkir, W.G., Barton, T.L. (2002). Enterprise risk management: pulling it all together. (*No Title*).
- Walker, P. L. (2007). *Enterprise Risk Management: Tools and Techniques for Effective Implementation*. Montvale, New Jersey, USA: Institute of Management Accountants, 4-14.
- Waweru, N. & Kisaka, E. (2013). The Effect of enterprise Risk Management Implementation on the Value of Companies Listed on the Nairobi Stock Exchange. *Journal of Applied Finance and Banking*, 3(3), 81-105.
- Wei, X.S., Wang, X.R., Zhang, J.C., Yang, W.B., Ma, W.L., Yang, B.H., Jiang, N.C., Gao, Z.C., Shi, H.Z. and Zhou, Q. (2021). A cluster of health care workers with COVID-19 pneumonia caused by SARS-CoV-2. *Journal of Microbiology, Immunology and Infection*, 54(1), pp.54-60.
- Westin, A.F. (1968). Privacy and freedom. *Washington and Lee Law Review*, 25(1), p.166
- Wilson, J. D. (2014). Human resource development. *European Journal of Training and Development*, 38(3), 254-258.
- Wong, K. Y. (2005). Critical success factors for implementing knowledge management in small and medium enterprises. *Industrial Management & Data Systems*, 105(3), 261-279.
- World Health Organization , (2016). Classification of digital health interventions v1.0: A shared language to describe the uses of digital technology for health. Geneva: World Health Organization; 2016

World Health Organization, 2017. A guide to identifying and documenting best practices in family planning programmes.

World Health Organization. (2017b). Health topics risk factors. Retrieved March 03, 2022, from http://www.who.int/topics/risk_factors/en/

World Health Organization. (2020). WHO calls for healthy, safe and decent conditions for all health workers, amidst COVID-19 pandemic. Retrieved March 1, 2022, from <https://www.who.int/news/item/28-04-2020-who-calls-for-healthy-safe-and-decent-working-conditions-for-all-health-workers-amidst-COVID-19-pandemic> (Ossein N. 2020)

World Health Organization. (2021a). COVID-19: occupational health and safety for health care worker: interim guidance, 2 February 2021. Retrieved June, 2022, from https://www.who.int/publications/i/item/WHO-2019-nCoV-HCW_advice-2021-1

World Health Organization. (2021b). Health and Care Worker Deaths during COVID-19. Retrieved October 20, 2022, from <https://www.who.int/news/item/20-10-2021-health-and-care-worker-deaths-during-COVID-19>

World Health Organization. WHO coronavirus (COVID-19) dashboard. Retrieved March 03, 2022, from <https://COVID-19.who.int>

Yaghoubi, M., Salimi, M., Meskarpour-Amiri, M. (2022). Systematic review of productivity loss among healthcare workers due to COVID-19. *The International journal of health planning and management*, 37(1), pp.94-111.

Yong, Y. C. & Mustafa, N. E. (2017). Critical success factors for Malaysian construction projects: An investigative review. *International Journal of Built Environment and Sustainability*, 4(2).

Young, R. & Jordan, E. (2008). Top management support: Mantra or necessity? *International Journal of Project Management*, 26(7), 713-725.

Yvonne Feilzer, M. (2010). Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. *Journal of mixed methods research*, 4(1), pp.6-16.

Zheng, L., Wang, X., Zhou, C., Liu, Q., Li, S., Sun, Q., Wang, M., Zhou, Q. & Wang, W. (2020). Analysis of the infection status of healthcare workers in Wuhan during the COVID-19 outbreak: a cross-sectional study. *Clinical Infectious Diseases*, 71(16), 2109-2113.

Appendices

Appendix A: Qualitative research guide for research participants

Appendix B: Qualitative Research Guide for Research Participants.

Data will be collected through face-to-face semi-structured interviews.

Section 1: Participants' information	
Name of interviewer	Dr Mosebi Thejane
Name of Interviewee (Unique identifier no.)	
Duration of employment	
Level of seniority of participant in the organisation	
Role of participant in the ERM committee	
Place of interview	
Date of interview	
Interview duration	Start time : { } End time : { }
Section 2: ERM processes	
1. What is your understanding of enterprise risk management at the XYZ PHC facility?	
2. How was the COVID-19 risk management aligned with the organisational strategic objectives of the XYZ PHC facility?	
3. How often does the risk management committee meet in the XYZ PHC facility to discuss risk issues?	
4. Who were the main stakeholders that were involved in ERM in the XYZ PHC facility during the COVID-19 pandemic?	
5. What communication methods were used to manage COVID-19 infection in the XYZ PHC facility?	
6. What risk identification, assessment, and tolerance setting were carried out at the departmental and operational level during the COVID-19 pandemic?	
7. How was the process of reviewing COVID-19 risk management done in the XYZ PHC facility?	

8. Which processes limited the impact of ERM during the COVID-19 pandemic?
9. What was the impact of the COVID-19 infection on individual staff, according to you?
10. What was the impact of the COVID-19 pandemic on ERM awareness in the XYZ PHC facility?
11. What valuable lessons did you learn about ERM during the COVID-19 pandemic?
12. What was the role of Top Management in developing ERM during the COVID-19 pandemic?
13. How effective was the process of developing ERM for the XYZ PHC facility? Explain, if can.
14. How was the organisational culture in assisting to strengthen or weaken ERM in the XYZ PHC facility? Explain.
15. Please be specific. Can any action or behaviour be implemented to improve the current practices of ERM in the XYZ PHC Health Care facility after the COVID-19 pandemic?
16. How crucial was information technology in the management of COVID-19 during the crisis?
17. What is your opinion regarding the organisational structure that was used to address the COVID-19 pandemic in the XYZ PHC facility?
18. Do you think that the XYZ PHC facility manages the COVID-19 pandemic well?
Section 3: Critical success factors of effective enterprise risk management
19. What are the critical success factors for effective enterprise risk management procedures in the XYZ PHC facility?
20. What type of training was offered to HCW about COVID-19 infection risk at the XYZ PHC facility?
21. What is your opinion about the level of trust in the XYZ PHC facility during the COVID-19 pandemic and its influence on ERM?
22. What criteria were used to assess ERM's effectiveness?
23. What criteria were used to align identified risks with the organisation's objectives and goals?
Section 4: Current risk management and the COVID-19 infection
24. What was the impact of the COVID-19 risk management strategy on XYZ PHC's performance?

25. How was the COVID-19 risk management strategy measured against the performances of XYZ PHC outcomes?

Section 5: Identify mechanisms to improve enterprise risk management in the future

26. According to you, how effective was the risk management process used to develop the COVID-19 risk management strategy at XYZ PHC facility? Was it effective, not effective, or highly effective?

27. How is the effectiveness of the current risk management policies, guidelines, and practices monitored for further improvement plans?

28. How can XYZ PHC's enterprise risk management strategy be improved to cope better with future risks such as the COVID-19 crisis?

Thank you for your participation.

Appendix C: Permission letter for District Manager

50 Andes Park
4 Wild Olive Street
Shellyvale
Bloemfontein
9300
14 November 2023

Mme Moatholi
Albert Nzula District Hospital
22 Louw Street
Trompsburg

Dear CEO

Re: Request to do Research study as part of my MBA course with UFS Business School (Ethical Clearance number: UFS-HSD2023/2009)

This serves as a request to ask permission to conduct a research study at Albert Nzula District Hospital titled: **ASSESSMENT OF THE EFFECTIVENESS OF RISK MANAGEMENT PROCESSES USED TO DEVELOP COVID-19 RISK STRATEGY AT XYZ PUBLIC HEALTH CARE FACILITY** as part of my curriculum for MBA at UFS Business School. Albert Nzula District Hospital will be referred as XYZ PHC facility in the study to ensure anonymity and to mitigate against future civil claims if any may arise. I got both ethic clearances from UFS GHREC and departmental ethic committee. (see attachments)

The achievement of the research objective will assist to strengthen risk management processes in the Department of Health (DoH) and guide other Public Health Care (PHC) facilities within the department, on similar setting on how to develop an agile and responsive risk management strategies when faced with uncertainty or crisis further, the study will enable the identification of critical success factors for effective risk management that will help ANDH to implement successful ERM programme with high chance of achieving organisational strategic goals and objectives

I promise to work in line with hospital research policy and to abide to all ethical clearance guidelines regarding research.

Thankfully

Dr Mosebi Thejane

Approved /not approved

Signature/Stamp

Appendix D: Cover letter

RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

24 June 2023

June – September 2023

TITLE OF THE RESEARCH PROJECT:

ASSESSMENT OF THE EFFECTIVENESS OF RISK MANAGEMENT PROCESSES USED TO DEVELOP COVID-19 RISK STRATEGY AT XYZ PUBLIC HEALTH CARE FACILITY

Principal Investigator / Researcher Name: Dr Mosebi Alexis Thejane

Principal Investigator/ Researcher Contact Number: 0609694050

Principal Investigator/ Researcher Student Number: 2015351188

FACULTY AND DEPARTMENT:

Economic and Management Sciences Business School

STUDY LEADER(S) NAME & CONTACT: Mr. Samuel Njenga

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The aim of the study is to assess risk management processes used to develop COVID-19 risk management strategy during the pandemic at the XYZ PHC facility to strengthen risk management processes in the Department of Health (DoH) and guide other Public Health Care (PHC) facilities on similar setting on how to develop an agile and responsive risk management strategies when faced with uncertainty or crisis, furthermore, to identify critical success factors for effective risk management that will help health care organisations to implement successful ERM programme with high chance of achieving organisational strategic goals and objectives and finally develop a criteria to be used to assess the effectiveness of risk management strategy in health care organisations.

WHO IS DOING THE RESEARCH?

The research will be conducted by Dr Mosebi Alexis Thejane. I am employed as a Public Health Medicine Registrar at Universitas Academic Hospital, Department of Health, in the Free State Province. I'm generally interested in building systems for organisational efficiency especially in public health sector, where I have more 15 year of management experience in hospital management.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study will receive approval from the Research Ethics Committee of UFS. A copy of the approval letter can be obtained from the researcher.

Approval number: UFS-HSD2023/2009

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

Public Health Care (PHC) facility being studied is one of the four district hospitals in ZY District, serving a population of 148 999 in the southern Free State Province mostly rural and uninsured. It is a newly built Public Health Care (PHC) facility mainly to provide trauma and orthopaedics clients on the National One (N1) route around Mangaung metro within 200 km radius, while still providing district health package in the ZY District municipality. It is a 110 bedded public health facility based in the ZY local municipality. The majority of the complicated patients or complex patients are referred to Regional Hospital for further management and treatment.

The PHC is one of the Department of Health's COVID-19 dedicated site in in the Free State Province. In 2021, the facility had to adapt its risk management strategy to be able to management COVID-19 infected patients and staff. Thus the purpose of the study is to evaluate the effectiveness of risk management processes used to develop COVID-19 risk management strategy during the pandemic to help to develop criteria that will used by other health facilities to create a responsive and agile risk management processes in the institution during crisis.

In the phase of the research, the study will involve 20 participants selected by the researcher for face-to-face interviews. Only health care workers with experience and knowledge and are active member of the PHC risk management committee during the past years will be eligible for selection. The researcher will schedule appointment with the selected participants for in-depth interviews in PHC ICAM room. The target group is extended management (top and middle managers) of the PHC, who are part of risk committee.

In the second phase of the research, the study will aim to receive responses from a minimum of 54 employees to ensure that the sample size is reflective of the population size. The target group will include all top and middle managers based in the facility only health care workers who are participated in enterprise risk management at managerial level during COVID- 19 pandemic are eligible for this study. The contact information of the respective participants will be obtained from the HR Persal of the PHC facility under study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The first phase of the study will involve face-to-face interviews with the selected participants. Each participant will be schedule for the interview in the ICAM room in the XZY PHC facility. The interview will last an hour.

The second phase of the study will involve self-completion questionnaire which will be distributed to each of the randomly selected participants by means of email or internet. For employees with no computer and internet access, paper-based surveys will be made available at their respective working sites in XYZ PHC facility. Employees with computer and internet access will receive an email that will contain a cover letter and questionnaire. The questionnaire consists of questions based the results of the first phase (qualitative) and will therefore not take longer than 30 minutes to complete and be email back to the researcher.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY

Participation is voluntary and there is no penalty or loss of benefit for non-participation. Being in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You can be part of the study by completing a questionnaire or by being ask to be part of the interview or both.

The first phase part of the study will involve conduction of the interviews by the researcher and followed by completion and submission of questionnaires by each participants. Once a completed questionnaire has been completed and submitted and interview is completed, you will not be able to withdraw from the research project, due to the fact that at that point the researcher will not be able to identify your data as you will be allocated unique and non-identifiable number.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

There are no benefits for the participants to take part in this study. However, evaluating effectiveness of risk management process used in the public health facility using COVID-19 pandemic, will help healthcare facilities in similar setting to develop agile and responses during crisis or uncertainty. If implemented correctly, it could have a positive and stabilising effect on management of health care facilities and help the Department of Health achieve its core mandate of making South African communities healthy and improve life expectancy of its citizen.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

Completing the questionnaire or taking part in the interviews will take either of your personal time or time from work. Breach of confidentiality could be a potential risk. However, this will be mitigated by the researcher signing Department of Health's confidentiality pledge an and abiding to Research Ethics Committee rules to ensure that no private or confidential information is accidentally shared/ written before the researcher receives/ analyses the questionnaires.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

Confidentiality will be maintained since your name will not be recorded anywhere and no one will be able to connect you to the answers you give. Your answers will be given a fictitious code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Only the researcher will have access to the data. The questionnaire will be sent to the sample group by email. The laptop to be used will have a username and password created and therefore, only the researcher will have access to the data obtained. There will be a dedicated safe allocated in the researcher's company office in which the hard copies will be locked away as soon as they are received and/or after analysing the data contained therein. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder and members of the Research Ethics Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records. The anonymous data obtained may be used for other purposes, e.g. research report, journal articles, conference presentation, etc. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report or any other publication. The researcher will do everything in my power to ensure that information shared in the interview and survey is kept confidentially.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet in the researcher's office at work. For future research or academic purposes, electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics review and approval if applicable. Electronic copies of data will be destroyed after the five years by deleting the files permanently whereas the hard copies will be shredded.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participants will not receive any incentive or payment. Completing the questionnaire or being interviewed will take either of your personal time or time from work. However, both questionnaire and interview are designed so that they will not take more than 2-hours to complete. Breach of confidentiality could be a potential risk. However, this will be mitigated by the researcher signing **pledge of confidentiality** to ensure that no private or confidential information is compromised.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings or any further information regarding the aspect of research, please contact Mosebi Thejane on +27 60 969 4050 or thejanema@gmail.com. Should you have concerns about the way in which the research has been conducted, you may contact Mr. Samuel Njenga on +27 51 401 7305 or njengasammy@gmail.com. The findings are accessible for 5 years after the completion of the study.

Thank you for taking time to read this information sheet and for participating in this study.

Appendix E: Consent form for participants

Research title: **ASSESSMENT OF THE EFFECTIVENESS OF RISK MANAGEMENT PROCESSES USED TO DEVELOP COVID-19 RISK STRATEGY AT XYZ PUBLIC HEALTH CARE FACILITY.**

CONSENT TO PARTICIPATE IN THIS STUDY

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet. I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.

I understand that all information about me will be treated in strict confidence and that I will not be named in any written work arising from this study

I understand that any audiotape material of me will be used solely for the research purpose and will destroyed on completion of your research

I agree to the recording of the structured close-ended questionnaire.

I have received a signed copy of the informed consent agreement.

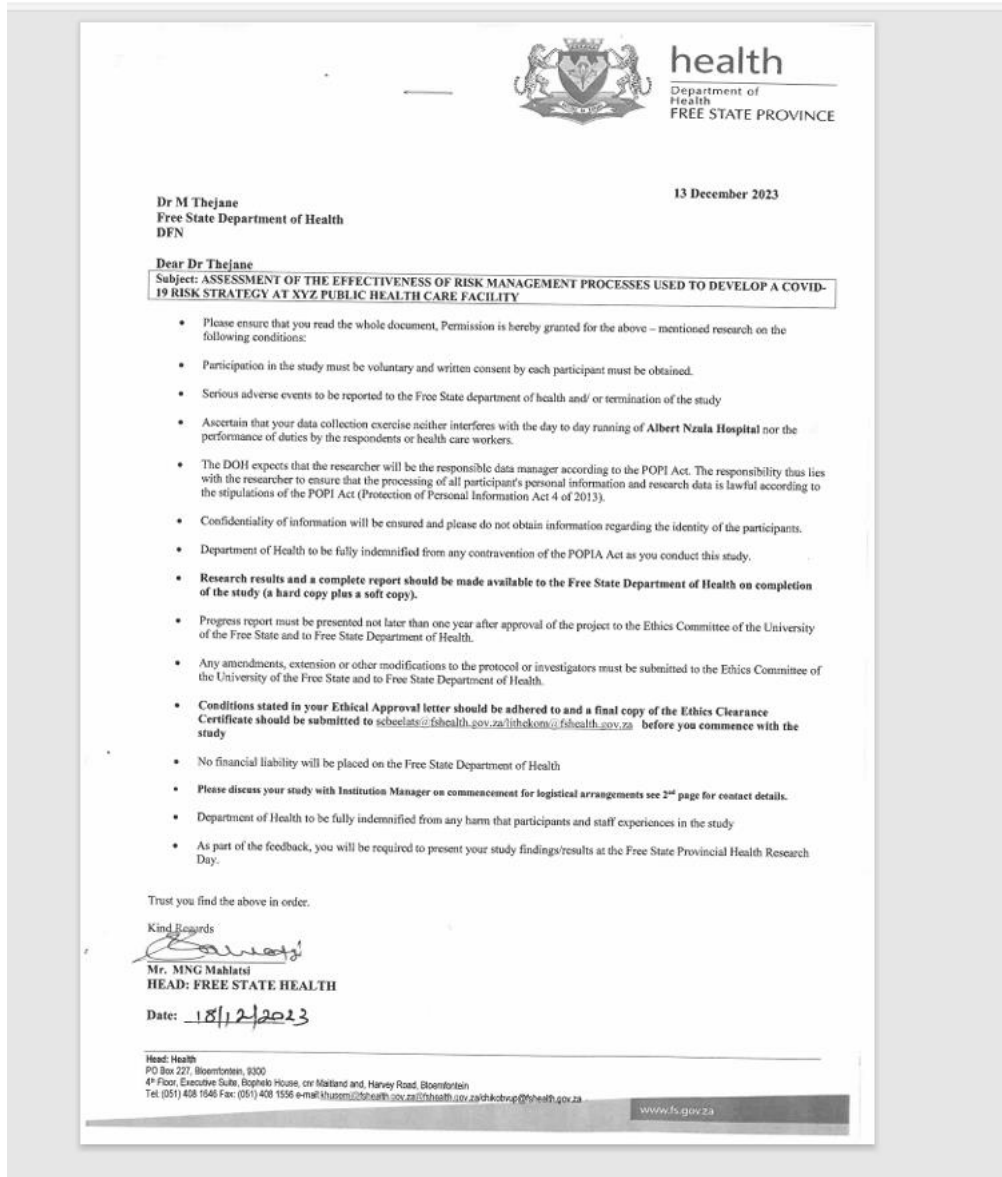
Full Name of Participant:

Signature of Participant: Date:

Full Name of Researcher: **Dr Mosebi Alexis Thejane**

Signature of Researcher: Date:.....

Appendix F: Permission letter from Head of Department



Appendix G: Pledge of confidentiality



health

Department of
Health
FREE STATE PROVINCE

PLEDGE OF CONFIDENTIALITY

HANDLING OF ALL DEPARTMENT OF HEALTH INFORMATION RECORDS IN THE EXECUTION OF DAILY FUNCTIONS

I, **Mosebi Alexis Thejane** (full names), Employed by the Department of Health at Universitas Academic Hospital (UAH) as **Public Health Medicine Registrar** (position),

On the **01 October 2023** (date of employment) with Persal no: **90792211**

Identity no: **7508285500083**, hereby declare that I understand that I will due to the nature of my work handle and have access to and insight to work related/ personal information of individual employees/ companies/ patients which is of confidential nature. I further declare that I understand that everybody has the right to privacy in terms of the Constitution of the Republic of South Africa.

PLEDGE

I hereby pledge to –

Honour individual's right to privacy as contemplated in the Constitution;

Hold in trust and confidence any departmental work/ personal information and/ or any documents or information processed or disclosed to me, discovered by me or prepared by me in course of handling matters of the Department during my employment or contractual obligations;

Use the relevant information only for the purposes of processing, use and maintenance

Not to disclose (in any form/means) any work related/personal information and documents of the Department to any unauthorised party/ any other person;

Not to retain copies of any written information personal or part of or otherwise of the Department or individuals in the Department for any other purposes than the official purpose of this Department;

I solemnly declare that I have taken note of the provisions of the Protection of Information Act (Act 84 of 1982) and in particular of the provisions of section 4 of the Act.

Approved supervisor declaration



Student name:	Mosebi Thejane	Student number:	2015351188
Module code:	MBRP7900	Department:	Business School
Project title:	ASSESSMENT OF THE EFFECTIVENESS OF RISK MANAGEMENT PROCESSES USED TO DEVELOP COVID-19 RISK STRATEGY AT XYZ PUBLIC HEALTH CARE FACILITY		

I Mr Samuel Njenga hereby declare that:

		Yes	No
1.	I have reviewed Chapter 1 of the above-mentioned student	X	
2.	I have reviewed Chapter 2 of the above-mentioned student	X	
3.	I have reviewed Chapter 3 of the above-mentioned student	X	
4.	I have reviewed the data collection instruments of the above-mentioned student	X	
5.	I am satisfied that the standard of the above-mentioned documents is on the expected level for a scientific review.	X	
6.	I hereby approve the documents for the above-mentioned student to be submitted for scientific review	X	

Signature of Supervisor

11/06/2023

Date of declaration



Dear **Dr EMN Caka** , **District Manager** of **Xhariep Health District (DoH, Free State Province)**

RE: Preliminary permission to conduct research at your organization

I am doing research and would like to request permission to conduct my research at **Albert Nzula District Hospital (ANDH)**.

DATE
15 March 2023

PRELIMINARY TITLE OF RESEARCH PROJECT*

Assessment of the effectiveness of risk management processes used to develop Covid-19 risk strategy at XYZ Public Health Care (PHC) facility.

PRINCIPAL INVESTIGATOR
Dr Mosebi Thejane **Student No:** 2015351188 **Contact No:** 0609694050

FACULTY AND DEPARTMENT
Economic and Management Sciences Faculty
Business School

STUDY LEADER NAME AND CONTACT
Name of study leader: Mr. Sammy Njenga
Contact number: 082 087 1962

APPROVAL NEEDED
This study still needs ethical approval from the General Human Research Ethics (GHREC) committee at the University of the Free State. As part of the application for ethical clearance I need temporary approval from you to conduct the research in **Albert Nzula District Hospital**. Once the Ethical Clearance certificate has been issued by the GHREC, the formal and final permission document and the data collection instruments will be provided to you and head of department (HoD) for final consideration and approval.

Therefore, in order for me to complete my research, I need your permission to:

Permission Requested	Request Approved
----------------------	------------------

* The Title and objective of the study may change, based on the reviews performed by the supervisor and scientific committee and the UFS. If the changes made has a significant impact on the permission requested, you will be informed as soon as possible

2


	(YES)	(NO)
Collect data from staff who are part of risk management committee and staff who were employed at ANDH during Covid-19 pandemic	✓	
Access to internal data to DHIS, Matron report and OHS and leave statistics	✓	
Access to internal documentation, risk management SOP and strategy, risk management reports, APP and quarterly reviews report	✓	
Including Albert Nzula District Hospital's name in the study and the title of the study. If the answer is no, please also indicate whether I can still get access to the above if the study results are anonymized.	✓	
Using the data collected for future conference proceedings and or article publication.	✓	

ADDITIONAL STIPULATIONS

If you have any additional stipulations about the temporary request for permission to conduct research in your organization, please include those stipulations in the space provided.


Your approval is also awaiting for Health Department ethics committee and Head of Department (HoD) approval, but the process can only commence after General Human Research Ethics (GHREC) committee at the University of the Free State approval.

Yours sincerely

Signature: 

Dr Mosebi Thejane

Approval Granted by:



Name, surname and signature of individual granting the permission

060 978 1735

Contact number



Appendix H: Ethical clearance letters



GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

09-Nov-2023

Dear Dr Mosebi Thejane

Application Approved

Research Project Title:

ASSESSMENT OF THE EFFECTIVENESS OF RISK MANAGEMENT PROCESSES USED TO DEVELOP A COVID-19 RISK STRATEGY AT XYZ PUBLIC HEALTH CARE FACILITY

Ethical Clearance number:

UFS-HSD2023/2009

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. Furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

Dr Adri Du Plessis

Chairperson: General/Human Research Ethics Committee

Adri
Du
Plessis

Digitally
signed by Adri
Du Plessis
Date:
2023.11.14
10:57:30
+02'00'

205 Nelson Mandela
Drive
Park West
Bloemfontein 9301
South Africa

P.O. Box 339
Bloemfontein 9300
Tel: +27 (0)51 401
9337
duplessisA@ufs.ac.za
www.ufs.ac.za



Appendix I: Quantitative research guide for research participants

Please tick the preferred score or answer you find most suitable for each of the following questions relating to the effectiveness of the risk management processes used to develop COVID-19 risk management in XYZ PHC facility: (1=Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree)

Section 0: Participants experience regarding risk management

1. Rate your level of experience in Risk management?

Low	1
Moderate	2
High	3

2. How long have you been an employee at this hospital?

< 5 years	1
5-10 years	2
> 10 years	3

3. At what level of level of management are you now?

Lower	1
Middle	2
Top	3

Quantitative questionnaire

Section 1: Risk management

Scoring	1=Strongly Disagree	2= Disagree,	3= Neutral,	4= Agree	5=Strongly Agree
4. I have a good understanding of risk management processes and activities in this hospital.	1	2	3	4	5

Section 2 : Risk management process

Scoring	1=Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5=Strongly Agree
---------	---------------------	-------------	------------	----------	------------------

Quantitative questionnaire					
5. My hospital identifies potential events affecting the entity's ability to successfully achieve its objectives	1	2	3	4	5
6. My hospital performs a formalised risk assessment process on a regular basis.	1	2	3	4	5
7. For each risk event, my hospital determines the appropriate risk response option of avoiding, reducing, sharing or accepting the risks	1	2	3	4	5
8. The control activities in my hospital include actions to be implemented in addressing the risks faced by the organisation.	1	2	3	4	5
9. In my hospital, there is a process to enable employees to report risk events that may have occurred or have occurred in their area of responsibility.	1	2	3	4	5
10. Ongoing monitoring of all the risks activities is performed on a regular basis	1	2	3	4	5
11. The tone from senior management communicates the importance of risk management	1	2	3	4	5
12. Hospital establishes and communicates explicitly risk tolerance levels or limits for all major risks.	1	2	3	4	5
Section 3 Critical success factors					
Scoring	1=Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5=Strongly Agree
13. The hospital collaborated effectively with its stakeholders to manage the risk of COVID -19.	1	2	3	4	5
14. The communication strategy was clear and effective in support of COVID-19 risk management in the hospital	1	2	3	4	5
15. The hospital made resources available for risk management during COVID -19	1	2	3	4	5
16. Regular trainings helped the organisation to keep up to date with changes and information during the COVID-19 pandemic	1	2	3	4	5
Section 4: Impact on set outcomes /performances					
Scoring	1=Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5=Strongly Agree

Quantitative questionnaire					
17. The COVID- 19 risk management strategy had a positive impact on the organisation's performances.	1	2	3	4	5
Section 5 : Evaluation of effectiveness					
Scoring	1=Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5=Strongly Agree
18. The effectiveness of COVID-19 risk management was evaluated using hospital targets (efficiency indicators)	1	2	3	4	5
19. The effectiveness of the COVID-19 risk management was evaluated using risk management benchmarks	1	2	3	4	5
Section 6: Best practices					
Scoring	1=Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5=Strongly Agree
20.The hospital is using quality improvement plans to strengthened risk management processes.	1	2	3	4	5
21. The hospital is integrating Information and Communication Technologies in risk management practices.	1	2	3	4	5
22.The hospital is committed to cascading risk management to lower levels.	1	2	3	4	5
23. My hospital is well prepared to manage future risks as a result of lessons learnt on managing COVID-19 crisis	1	2	3	4	5
Section 7: Risk management & COVID_-19 infection					
Scoring	1=Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5=Strongly Agree
24.The way in which the COVID-19 pandemic was managed increased awareness of mental health management during crisis	1	2	3	4	5
25.The way in which the COVID -19 pandemic was managed improved risk management processes in the hospital	1	2	3	4	5
26 .The way the COVID-19 – was managed increased the awareness of risk management processes in the hospital	1	2	3	4	5

Questionnaire						
Items	1	2	3	4	5	
Participants experience regarding risk management						
	Total					
Rate your level of experience in risk management?	6	35	13	54		
How long have you been an employee at this hospital?	11	34	9	54		
At what level of level of management are you now?		46	8	54		
Risk management						
	Total					
I have a good understanding of risk management processes and activities in this hospital.	2	2	12	27	11	54
Risk management process						
	Total					
My hospital identifies potential events affecting the entity's ability to successfully achieve its objectives		2	11	29	12	54
My hospital performs a formalised risk assessment process on a regular basis.		5	7	27	15	54
For each risk event, my hospital determines the appropriate risk response option of avoiding, reducing, sharing or accepting the risks	2	3	6	24	19	54
The control activities in my hospital include actions to be implemented in addressing the risks faced by the organisation.	2	5	9	17	21	54
In my hospital, there is a process to enable employees to report risk events that may have occurred or have occurred in their area of responsibility.		3	13	18	20	54
Ongoing monitoring of all the risks activities is performed on a regular basis		10	8	20	16	54
The tone from senior management communicates the importance of risk management		5	12	25	12	54
Hospital establishes and communicates explicitly risk tolerance levels or limits for all major risks.			17	23	14	54
Critical success factors						
	Total					
The hospital collaborated effectively with its stakeholders to manage the risk of COVID -19.		6	6	20	22	54
The communication strategy was clear and effective in support of COVID-19 risk management in the hospital			14	15	25	54
The hospital made resources available for risk management during COVID -19			5	20	29	54
Regular trainings helped the organisation to keep up to date with changes and information during the COVID-19 pandemic			10	17	27	54
Impact on outcomes /performance						
	Total					
The COVID -19 risk management strategy had a positive impact on the organisation's performances.			9	25	20	54
Evaluation of effectiveness						
	Total					
The effectiveness of COVID-19 risk management was evaluated using hospital targets (efficiency indicators)			2	23	29	54
The effectiveness of the COVID-19 risk management was evaluated using risk management benchmarks			3	29	22	54
Best practices						
	Total					
The hospital is using quality improvement plans to strengthened risk management processes.			3	14	37	54
The hospital is integrating Information and Communication Technologies in risk management practices.		4	9	23	18	54
The hospital is committed to cascading risk management to lower levels		6	12	28	8	54
My hospital is well prepared to manage future risks as a result of lessons learnt on managing COVID-19 crisis	3		3	21	27	54
Enterprise risk management & the COVID -19 infection						
	Total					
The way in which the COVID-19 pandemic was managed increased awareness of mental health management during crisis		2	16	13	23	54
The way in which the COVID -19 pandemic was managed improved risk management processes in the hospital				29	25	54
The way the COVID-19 - was managed increased the awareness of risk management processes in the hospital			5	25	24	54
Total						

